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1. EXECUTIVE SUMMARY

1.1. OVERVIEW

The Statewide Automated Welfare System (SAWS) Consortium IV (C-IV) is undertaking the development of the C-IV System, a fully automated and integrated system specifically designed to support the administration of human services and employment programs. Following a successful procurement, C-IV has contracted with Andersen Consulting to design, develop, and implement the C-IV System over a 42-month period.

To date, the Consortium has allocated a significant amount of resources, effort, and funding toward the success of the C-IV project. Given the complexity and size of this project, the Consortium now seeks Quality Assurance (QA) services to ensure that it can be completed within the established schedule and budget and that the system meets all stated requirements; as well as, the Consortium's intent for automation.

In response to C-IV's request for QA services, GovConnect,[1] formerly known as Renaissance Government Solutions (RGS), is pleased to provide this Statement of Work (SOW). GovConnect will provide:

- Ongoing project management assistance in such areas as Work Plan assessment, issue identification and resolution, risk management, budget management, and contract compliance monitoring.

- Formal review of deliverables to be produced by the Andersen Team (as identified in Attachment B). These key deliverables correspond to milestones/accomplishments across all phases of the project (i.e., requirements analysis, general and detailed designs, coding, system testing, user acceptance testing, site preparation, training, pilot, conversion and Consortium-wide implementation).

- Independent testing of the system as described in Sections 2 and 3 to ensure[2] it meets stated requirements and to provide a basis for the recommendation to proceed with implementation.

GovConnect is uniquely qualified to provide this range of services to C-IV. GovConnect has provided quality service to the Consortium for the past four years, as C-IV has moved from the concept phase; through procurement, contracting, and approval phases; and now during preparation for the development project. During this relationship, GovConnect

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[1] Since RGS has recently changed its name to GovConnect, it is still identified as Renaissance Government Solutions on the California State Department of General Services' Master Service Agreement (MSA) listing. This document refers to "GovConnect" even though the California State Department of General Services has not given RGS notification that it has changed the name for the MSA listing to GovConnect.

[2] For the purposes of this QA Statement of Work, the word "ensure" shall be deemed to mean that GovConnect will assess and evaluate Andersen Consulting's performance, determine whether or not Andersen Consulting is or has been meeting or has met its performance obligations and will instruct Consortium on what actions need to be taken with respect to Andersen Consulting's performance.

has provided project management assistance and ongoing business and technical analysis. GovConnect has supported business process reengineering, requirements development, development of the Solicitation of Proposals (SOP), proposal evaluation, contract negotiations, development of the Implementation Advance Planning Document (IAPD), completion of a new Alternatives Analysis, staff acquisition planning, and funding approvals.

Through this working relationship, GovConnect has developed a keen understanding of the unique characteristics of Riverside, San Bernardino, Merced, and Stanislaus Counties; as well as, a thorough working knowledge of the Consortium's collective business needs, automation priorities, technology issues, political pressures, and user concerns. In addition to this C-IV specific experience, GovConnect is able to draw upon years of nationally recognized experience in human services automation projects in other states. In short, GovConnect is the only vendor that is able to provide an understanding of the intent behind C-IV's automation requirements and the specialized quality assurance techniques that will ensure that those requirements are met.

GovConnect is proud to offer the Consortium its resources and proven approaches to support the successful development and implementation of the C-IV system. In this Statement of Work, GovConnect presents its plan for providing the Consortium with responsive QA project management support, deliverable review, and independent testing services.

1.2. GOVCONNECT AT A GLANCE

GovConnect, formerly known as Renaissance Government Solutions (RGS) and Eligibility Management Systems (EMS), Inc., is well known as a human services management consulting firm with a record of successfully completing critical automation projects. GovConnect's reputation has been developed within California and across the country at both county and state government levels. Over the past decade, GovConnect has provided a range of services in California for the WCDS Consortium's CalWIN Project, Los Angeles County's LEADER, and the State's Child Welfare System projects. Services have included business process improvement, system planning, procurement support, quality assurance, and/or project management.

GovConnect is a wholly owned subsidiary of Renaissance Worldwide Inc., a financially strong, $750 million corporation headquartered in Waltham, Massachusetts. Renaissance Worldwide was recently ranked among the top thirty international management consulting firms. GovConnect represents multiple business units that were brought together under the Renaissance Worldwide umbrella for the sole purpose of providing "best-in-class" automation support services to the government sector. With its 300 staff, and an additional 5,000 staff available through Renaissance Worldwide, GovConnect is able to offer an integrated array of services that expands the previous capabilities of EMS, Inc. GovConnect is positioned to provide the Consortium with professional services and project consulting in the areas of Project Management, Quality Assurance, Independent Verification and Validation (IV&V), application development, web-enabled

solutions, network systems, technical documentation, data warehousing/decision support, and help-desk management.

1.3. GOVCONNECT QUALITY ASSURANCE APPROACH

The value of the GovConnect quality assurance approach lies in the use of skilled personnel who have significant experience providing project verification, validation, and management support in human services automation projects. GovConnect staff practice a philosophy that has proven successful in similar projects. Tenets of the GovConnect philosophy include:

▪ **Consistent On-Site Presence.** The scope and complexity of this project will dictate a need for consistent and timely personal interaction among the Consortium Project Team, the Andersen Team, and GovConnect in the role of Quality Assurance Contractor. Based on previous successful experiences, GovConnect understands that the synergies created by day-to-day interactions between the Project participants will create clear lines of communication that cannot be achieved in any other way. For this reason, the GovConnect Team will be committed full-time and on-site for the duration of project activities, unless otherwise approved by the C-IV Project Director.

▪ **Team Mentality.** GovConnect understands the importance of maintaining a close working relationship among the Consortium Project Team, other key County staff, and the Andersen Team. Such a close working relationship is essential for facilitating input from each of these teams into the development and review of the deliverables. However, GovConnect's highest priority will be to support the Consortium Project Team in fulfilling its commitments for reviewing deliverables and resolving issues in a timely manner. By providing early identification of potential problems and issues, coupled with developing alternative courses of action or mitigation strategies, GovConnect can help the Consortium address difficulties proactively. GovConnect's role will not be to resolve each project issue, but rather to facilitate the issue resolution process by adding clarity, analyzing impact, determining potential changes to requirements, etc.

▪ **Proactive Quality Management.** GovConnect believes that the highest degree of quality can only be achieved by "building in" quality during all stages of the Project. When errors and rework are identified early, the cost and scope of risk of project failure is minimized. In contrast, delaying identification of issues until completion of a deliverable can result in significantly increased risks of project failure and costs. GovConnect practices this philosophy by beginning the assessment of quality during the development of Deliverable Expectation Documents (DEDs) and continuing through detailed reviews of draft, interim, and final deliverables.

Each of these three tenets will serve as guideposts to ensure that the Consortium receives not only the requested project management support and deliverable review services, but a comprehensive approach for addressing quality. Working on behalf of C-IV, GovConnect will assure the Consortium that the Andersen Team's deliverables and products will be prepared according to the Consortium requirements and within the contracted time and cost. GovConnect will support the Consortium to ensure all business, technical and

performance requirements are understood and accurately incorporated into the development of all deliverables.

1.4. SCOPE OF SERVICES

GovConnect has structured a three-pronged set of services tailored to the Consortium's needs. These services are categorized as Project Management Support, Deliverable Reviews, and Independent Testing.

1.4.1. Project Management Support Services

Understanding the relationship between the technical and business dimensions of a large-scale system development and implementation project is a complex proposition. The GovConnect project management approach offers input and solutions that will help the Consortium effectively allocate resources, manage development and implementation tasks, and identify and understand issues and risks. In doing so, GovConnect will enable the Consortium to proactively address the risks and issues associated with these types of endeavors, and create a framework approaching and completing the Project with confidence.

The C-IV Project will require a proactive project management methodology that combines management process, documented guidelines, proven techniques, and appropriate management tools. The standard components of GovConnect's approach include:

- **Work Plan Assessment.** Ongoing assessment of the Work Plan tasks and due dates to ensure successful completion of the Project. This includes critical path and task dependency analysis, as well as ongoing assessment of the use of both C-IV and contractor resources, including specific allocation to tasks.

- **PCD Assessment.** Ongoing assessment of the PCD. The primary project management deliverables are the Project Control Document (PCD), Work Plan and Change Management related deliverables. GovConnect will work with the Consortium and Andersen teams to create, monitor, and evaluate a "Best-of Breed" project management plan in the form of the Project Control Document (PCD) and corresponding Work Plan.

- **Status Reporting.** Provide monthly status reports regarding GovConnect participation and observations by team. This monthly report will include the assessment of the Development Vendor's PCD and Work Plan, and all other deliverables reviewed during the period. At several critical points in the C-IV project, the monthly status report will also include formal assessments and recommendations regarding the completion of key milestones and readiness to proceed.

- **Issue Tracking and Resolution.** Provide assistance in the identification, assessment, tracking and resolution of all Project issues.

- **Risk Management.** Provides analysis of major risks associated with the project scope, schedule, budget and outstanding issues.

In addition to the standard project management activities described above, GovConnect will provide support for other activities, as requested by the Consortium. These services include:

- **Contract Compliance Assessment.** GovConnect will assist the Consortium Project Director and Contract Manager/Administrator in assessing whether Andersen is in compliance with all contract terms and conditions. Additionally, this task will include monitoring of all third-party hardware and software purchases, license agreements and maintenance agreements.

- **Participate in Consortium, State and Federal Meetings as requested.** The GovConnect Project Manager and other staff (as appropriate) will attend required Consortium and stakeholder meetings as requested. As necessary GovConnect will report to the Consortium Board of Directors significant deficiencies or risks regarding the System and any other circumstances that could significantly impact the Project or the System including the budget and schedule. GovConnect will serve as an integral part of ongoing communications and status updates to State and federal Stakeholders.

- **Budget Management and Implementation Advance Planning Document Updates (IAPDUs).** The annual IAPDU facilitates the ongoing funding process by comparing actual progress and costs against those estimated in the baseline IAPD. GovConnect will support this process on an ongoing basis by working with the Consortium Project Director and Contract Manager/Administrator to track and manage the overall project budget as defined in the approved IAPD. On an annual basis, GovConnect will consolidate the updated project budget and status information and prepare the required IAPDU for submission to the State and federal stakeholders.

- **Review of Change Management Deliverables.** GovConnect will review the following Change Management deliverables to be produced by the Andersen Team.
  - Change Plan
  - Sponsor Goals and Expectations Report
  - Communication and Involvement Plan
  - County Strategic Direction Report
  - Review of the Value Realization Plan

- **Additional IAPD Updates.** In cases in which C-IV is required to revise its IAPD more than once annually, GovConnect will assist in updating the document to reflect current project status and actual costs.

- **Change Order Analysis.** GovConnect will be available on an on-going basis to aid the Consortium with analysis of any change orders submitted by the Andersen Team. GovConnect will review Change Order Requests with respect to viability of the scope, level of effort, resources, schedule, cost, and impact to the existing project work plan.

1.4.2. Deliverable Review Services

GovConnect will formally review deliverables produced by the Andersen Team. *(See Attachment B for a complete list of the deliverables to be reviewed by GovConnect.)* Due to extensive working knowledge of the Consortium and its individual member Counties attained over the past three years, deliverable review input provided by GovConnect will be very substantive. GovConnect will work with the Consortium throughout the entire deliverable development, review, comment, and approval process, beginning with development of the Deliverable Expectation Document (DED) and continuing through submission of a recommendation for approval. GovConnect's level of involvement will vary based upon the scope and complexity of each deliverable to be reviewed, but will generally include:

- Input to and assessment of DED development;

- Provide in-depth deliverable reviews to address quality, DED standards, and the ability to trace requirements and compliance.

- Provide comprehensive and specific comments resulting from draft, interim and final deliverable reviews and structural walkthroughs, including but not limited to a summary of all outstanding issues and recommendations regarding the acceptability of deliverables and development of detailed formal review reports for the Andersen deliverables identified in Attachment B.

- Participation in general and detailed design sessions and related weekly status meetings;

- Participation in planning meetings for site preparation and installation, testing, training, conversion, pilot and implementation;

In some cases, re-review of deliverables may be necessary to validate correction of deficiencies identified in earlier reviews. At the Consortium's request, a level of effort has been included in the GovConnect Work Plan to provide this type of re-review of the Andersen deliverables.

Since the types of information that will be assessed will vary depending on the deliverable being reviewed, GovConnect will employ a standard reporting format to record quality assurance activities and facilitate the Consortium's review. Specifically, the reporting methodology ensures that the Deliverable Review Reports will document:

- Overall quality of the deliverable;

- GovConnect Quality Assurance activities that were undertaken for deliverable review including but not limited to meetings attended, work observed, tests initiated and/or observed, documentation or code reviewed;

- Modifications to the deliverable already incorporated as a result of GovConnect activities;

- Assessment of the deliverable's adherence to DED standards;

- Requirements Traceability Matrix;

- Comprehensive and specific comments, including a discussion of identified issues, deficiencies, and suggestions for improvement; and

- Recommendation as to deliverable acceptability and any conditions linked to acceptance.

1.4.3. Independent Testing Services

The GovConnect approach to independent testing for the C-IV project combines the IEEE Verification and Validation (V&V) 1012-1998 standards for software testing with historically proven methods and procedures for testing new systems development in the Human Services arena. GovConnect's independent testing services will provide the Consortium with an independent verification of key components of the software and system to determine that requirements (functional and technical) have been satisfied, and that the system functions as intended.

The goal of independent testing is to:

- Detect and correct software errors in key portions of the system as early as possible;

- Provide management with additional insight into the test process and application related risks;

- Establish a basis for assessing the completion of each test phase;

- Ensure compliance with stated performance requirements; and

- Provide a basis for the recommendation to proceed with implementation.

GovConnect will work with the Consortium Team to ensure that a comprehensive test plan is created, well-defined test scenarios are developed, and a process exists for documenting results. Once the Project's test plan is established, GovConnect will conduct *independent* tests associated with Releases 1, 2, and 3. These tests will primarily focus on components of system development that are functionally complex, time critical, error-prone, or in which critical dependencies exist (i.e., key external interfaces).

It is important to note that GovConnect independent testing activities will be conducted independently, but simultaneously, with the Project's overall integration (system) testing and user acceptance testing efforts. As a result, there will be little impact to the overall project testing schedule.

As part of the independent test methodology, the C-IV application's readiness will be measured by tracking the coverage and accuracy results of the iterations of each test cycle. The tracking will be at the test condition level, which will allow management to address specific business functions and performance requirements if any are found to be defective. GovConnect will test the system to ensure the results are correct, consistent, complete, accurate, and testable.

1.5. QUALITY ASSURANCE SCHEDULE

The GovConnect Quality Assurance schedule is linked to the overall 42-month C-IV Development Project schedule proposed by the Andersen Team and approved by the Consortium. Exhibit 1-1, the GovConnect C-IV Quality Assurance Schedule, is presented below as a summary Gantt chart view from the GovConnect C-IV QA Work Plan.

Exhibit 1-1 GovConnect C-IV Quality Assurance Schedule

ID	Task Name	Start	Finish
1	Project Management	1/16/01	6/11/04
2	Assistance with Issue Resolution Process	1/16/01	6/11/04
3	Assistance with Risk Management Process	1/16/01	6/11/04
4	Assistance with Contract Management	1/16/01	6/11/04
5	Assistance with Change Order Analysis	1/16/01	6/11/04
6	Preparation of IAPD Updates	1/16/01	6/11/04
7	Review AC Deliverables	1/16/01	6/4/04
204	Site Preparation	7/16/01	7/30/02
205	Review AC Deliverables	7/16/01	7/30/02
226	Telecommunications Design and Install	10/1/01	4/9/03
227	Review AC Deliverables	10/1/01	4/9/03
263	System Development	3/1/01	1/5/04
264	Review AC Deliverables	3/1/01	2/11/03
334	Testing	10/22/01	1/5/04
396	Training Plan	11/19/01	6/30/03
397	Review AC Deliverables	11/19/01	6/30/03
418	Conversion	4/1/02	5/27/04
419	Review AC Deliverables	4/1/02	5/27/04
477	Implementation	8/20/01	11/21/03
478	Review Release 1 AC Deliverables	8/20/01	7/12/02
479	Review AC - Overall Implementation Plan	8/20/01	9/12/01
483	Review AC - Release 1 Implementation Plan	6/19/02	7/12/02
487	Review Release 2 AC Deliverables	1/17/03	11/21/03
488	Review AC - Release 2 Implementation Plan	1/17/03	2/11/03
492	Review AC - Release 2 Pilot Completed - Star	11/17/03	11/21/03
496	Review Release 3 AC Deliverables	6/19/03	7/14/03
497	Review AC - Release 3 Implementation Plan	6/19/03	7/14/03
501	Initial Maintenance and Operations	12/17/01	1/11/02
502	Review AC Deliverables	12/17/01	1/11/02

1.6. SUMMARY

GovConnect is able to offer the knowledge, expertise, and resources needed to provide the quality assurance services requested by C-IV. The GovConnect Team is acutely aware of the issues that impact the development of large public assistance systems. This insight, coupled with an understanding of the Consortium gained through a four year working relationship, will enable GovConnect to provide quality assurance services and guidance that cannot be matched by another vendor.

GovConnect will apply its experience and methodology to support management of the C-IV development project, evaluate the quality of the Andersen Team's deliverables, and assess progress in comparison to the established project budget and schedule. GovConnect's primary focus will be to ensure that the Consortium receives the system that it envisioned and that the system is completed in a timely and cost effective manner. When risks that may impede progress or escalate costs are identified, GovConnect will work with the Consortium's Project Management Team to develop appropriate mitigation plans and contingencies. In addition, GovConnect, in its professional judgment and expertise, will conduct independent testing activities to validate the system's functionality and capabilities prior to acceptance by the Consortium. These services will complement the Consortium's Project Management Team to provide strong management of the project, protection of C-IV's interests, minimization of risks, and a focus on developing automation that will fully support the Consortium's innovative business model.

2. GOVCONNECT QUALITY ASSURANCE APPROACH

Quality management combines the practices of quality assurance and quality control to ensure that deliverables, work products and services meet or exceed a set of pre-established criteria/standards as well as end-user requirements.

The Consortium's primary objective for the Project is to implement a fully functional C-IV system (that meets all requirements set forth in the SOP, Andersen's proposal, and contract) on-time and within budget. The GovConnect Team's charter is to ensure that this objective is met by applying "quality-driven" processes that meet or exceed strict and consistent standards. GovConnect will achieve this objective through a total team commitment to the quality process.

GovConnect's commitment and approach to quality assurance provides important advantages to the Consortium:

- The GovConnect quality assurance (QA) approach is founded in years of successful welfare automation experiences. Over the past decade, GovConnect has managed or provided support for over forty states during their health and human services automation efforts. Through these efforts GovConnect has developed best practices that are tailored to the complexities of these development projects.

- A long-standing relationship with C-IV gives the GovConnect QA Team the insight necessary to understand the system requirements and direction, as well as, the Consortium's vision for the system. This familiarity reduces risks and provides an additional presence within the Project that truly understands the Consortium's business needs, priorities, and constraints.

- GovConnect grounds its QA approach within the framework of internationally accepted standards organizations such as the Institute of Electrical and Electronics Engineers (IEEE) and specifically the IEEE 1012-1998 which is the standard for Software Verification and Validation (V&V). This QA SOW adapts the IEEE 1012-1998 standard at an integrity level of 4 for the specific tasks described. RGS also bases its Quality Assurance approach on the International Standards Organization standards for Quality Assurance (ISO 9003). Consistent with IEEE V&V standards, the RGS approach includes the performance of review and test activities that correspond to the C-IV system lifecycle and development schedule.   RGS has tailored its approach so that as key analysis and design deliverables are further refined through the development process, previously completed work such as requirements traceability is not re-worked, but instead re-confirmed throughout the project. While the GovConnect QA approach is customized for system development in the human services arena, incorporation of proven IEEE principles ensures that proven QA processes will be applied throughout the C-IV development.

The remainder of this section elaborates on the GovConnect approach for providing the specific QA services requested by the Consortium:

- Project Management Support (Section 2.1);

- Deliverable Review (Section 2.2); and

- Independent Testing (Section 2.3).

2.1. PROJECT MANAGEMENT SUPPORT APPROACH

The GovConnect style of project management support centers on attention to detail and the promotion of strong supportive working relationships. GovConnect understands that the quality, style, and approach to project management are key ingredients to the success of any project. GovConnect's project management methodology draws on proven IEEE Management V&V and Planning V&V methodologies as defined in the IEEE 1012-1998 standard and enables GovConnect to provide a consistent level of project management support throughout the software life cycle processes. In preparing for the development phase of the C-IV Project, GovConnect has assured the Consortium has been provided these key management precepts throughout the entire course of the planning phase. GovConnect takes pride in being a project management specialist and in successfully demonstrating these skills for other states and localities during large-scale system projects similar to C-IV.

2.1.1. Project Management Objectives

GovConnect's proposed project management methodology provides a means of accomplishing three fundamental objectives, which must be clearly understood within the context of large system development efforts. These objectives include:

- **Dynamic project management.** Assist in monitoring and managing the work, and corresponding resources to ensure that quality products are delivered on schedule and within budget.

- **Effective communications.** Communicate status, issues and progress in a timely and accurate manner to all project participants throughout the duration of the Project.

- **Proactive quality management.** Provide a well-defined process for evaluating both work products and processes to deliver quality end-products that meet business objectives, end-user expectations, and defined requirements, and are as free of errors as possible.

The first step in meeting project objectives is performing the basic activities that are inherent to sound management and control procedures. The management of a project involves incorporation of techniques and tools that are geared to meeting project objectives on time and within budget. As the Quality Assurance Contractor, the GovConnect role is to assess and provide input to the products, processes and practices recommended by the Andersen Team.

2.1.2.   Project Management Tools

GovConnect will use the available automated tools (provided at the Project site by the development Vendor) to facilitate QA project administrative and management activities. This will allow for an up-to-date view of documentation (such as the PCD, DEDs, standards, Work Plan, issues database, and risk database), and common access to project support and development tools, electronic mail, scheduling, project deliverables, and project folders. In addition, GovConnect will use automated tools necessary, in its professional judgment and expertise, for the appropriate review of design and code analysis, and testing.

2.1.3.   Project Management Support Methodology

The Consortium has assembled a Project Management Team that will be led by a qualified Project Director.   As the QA Contractor, GovConnect will solidify the Consortium's Project Management Team by providing a standard set of project management support services (composed of five components) relative to the areas of expertise required at the various junctures of the Project as well as other specialized project management services requested by the Consortium. GovConnect will provide on-going support for:

- Work Plan Assessment,

- Project Control Document (PCD) Assessment,

- Status Reporting,

- Issue Tracking and Resolution, and

- Risk Management.

Each of these five major components of the GovConnect Project Management Support methodology is described in detail in the following subsections; Sections 2.1.3.1 through 2.1.3.5. Additional Project Management Support services that GovConnect will provide at the request of the Consortium are described in Section 2.1.4.

2.1.3.1.   *Work Plan Assessment*

As a primary component of the Project Control Document, the C-IV Project Work Plan is the most critical management tool to be employed during the Project. The Work Plan identifies each task, subtask and deliverable to be completed for the Project. Every hour is accounted for in the Work Plan, as well as each of the resources allocated throughout the development and implementation phases. It is imperative to closely monitor the Work Plan so that impacts to both critical and non-critical path activities can be identified and addressed on a timely basis. Thus, GovConnect will conduct an ongoing assessment of the Work Plan tasks and due dates to ensure successful completion of the Project. This includes critical path and task dependency analysis, as well as ongoing assessment of the use of both C-IV and contractor resources, including specific allocation to tasks. Slippage of deliverables does not simply impact the current workflow; it can also

influence the schedule and budget for all subsequent tasks and deliverables. Without ongoing detailed review and evaluation of Work Plan completion status, possible impacts will never be explored and redefined, which may result in insurmountable schedule slippage and budget overruns. Issues or problems that are quickly identified are more likely to be absorbed and appropriately rescheduled into the Work Plan with minimal impacts.

GovConnect will maintain a duplicate of the overall Work Plan using Microsoft Project as the automated tool. GovConnect will monitor project activities, progress, and any proposed changes through day-to-day project task involvement, status reporting provided by the Andersen Team, and other GovConnect quality assurance involvement.

At key checkpoints (such as the completion of the detailed design phase), GovConnect will use actual performance information experienced to date to reassess and evaluate remaining key project tasks. This evaluation effort will include analysis of the probability that subsequent tasks and deliverables can be completed within the existing schedule, resources, and budget. GovConnect will also recommend adjustments to the Work Plan, where necessary, to eliminate or reduce the negative impacts of deviations. GovConnect will proactively identify issues and risks and recommend corrective action when necessary. The *Work Plan Assessment Report* section of the *GovConnect Monthly QA Status Report* will serve as the primary mechanism for formally communicating this assessment (see Section 2.1.3.3.).

2.1.3.2. Project Control Document (PCD) Assessment

The PCD will serve as the cornerstone for the management of the C-IV Project by providing the overall plan for the development of the C-IV System. The PCD will consist of all approaches, guidelines and DEDs for completing all project tasks and deliverables, as well as defined processes for communication, issue and risk management. The PCD will provide all C-IV Project Team members and any external stakeholders with an understanding of how and when the activities of the C-IV Project will be executed.

While the Andersen Project Management Team will be responsible for preparing and maintaining the PCD, GovConnect will participate in its development to provide input from a quality assurance perspective. GovConnect will provide guidelines by which the PCD will be managed and evaluated.

Once the initial PCD is completed during project initiation, it will be updated as necessary, but no less than monthly, and reviewed by GovConnect on a monthly basis to ensure all changes to the Work Plan, DEDs or deliverables, and their impacts are accurately reflected and described. The key components of the C-IV PCD to be reviewed by GovConnect include but are not limited to:

▪ **Project Narrative.** A narrative description of the project.

- **Scope and Objectives.** A statement of the scope, objectives and expectations for the project. Periodically, these will be reviewed and reconfirmed with executive level management and stakeholders.

- **Organization Chart.** A hierarchical structure depicting the organization of the interdisciplinary project team and its reporting relationships. All Consortium, Development Contractor, QA Contractor and stakeholder personnel will be included in the organizational structure. A discussion of team responsibilities will also be included.

- **Detailed Work Plan.** The details of tasks and subtasks and associated level of effort in person-hours, and the timeframe for completion.

- **Staffing Plan.** The details of staff assignments by team, including responsibilities, person-hours, and the tasks and deliverables assigned to staff.

- **Milestone Chart.** A report of milestones, deliverables and key sub-deliverables with timeframes for monitoring progress of each task in a phase.

- **GANTT Chart.** A chart showing the tasks, milestones, critical path, and dependencies, organized by deliverables and sub-deliverables.

- **Summary Schedule.** A bar chart schedule graphically showing the start, completion, and milestones for deliverables or sub-deliverables, as appropriate.

- **Deliverables Expectation Documents.** A description of the format and content for each deliverable to be produced for each task by the Andersen Team. DEDs must be approved in advance of initiating work on any deliverable.

- **Deliverables List.** A list of the deliverables to be produced for each task and sub-task, a paragraph describing each, and the projected required time for completion.

- **Communication Plan.** A description of both internal and external communication approaches and procedures.

- **Issue Identification, Tracking, and Resolution Process.** The plan for documenting, monitoring and tracking of all project related issues via the Issue Tracking Database.

- **Risk Identification and Mitigation Process.** The process for documenting, monitoring and tracking all project risks, including priority, impacts, probability of occurrence, and mitigation strategies via the Risk Management Database and quarterly Risk Management and Mitigation Report.

- **Administrative Processes and Procedures.** The procedures for all aspects of project administration including time and expense tracking and reporting, status reporting, orientation, reporting of software or hardware problems, requesting hardware or software, phone and e-mail lists, staff departures, and the like.

- **Assumptions.** A list of all relevant assumptions made in the development of the plan. All assumptions upon which the work plan and resource estimates have been based will be clearly documented.

The GovConnect Team will help ensure that the PCD is kept current. Following each monthly review of the PCD, GovConnect will provide a detailed description of

shortcomings and outstanding issues related to the next major pending deliverable. Issues such as scope changes, staff expertise, and schedule will each be considered in the PCD review process. GovConnect's monthly assessment of the PCD will be documented in the *PCD Review and Assessment Report* section of the *GovConnect Monthly Status Report* (see Section 2.1.3.3.)

GovConnect will also coordinate with both the Consortium and Andersen Teams on a monthly basis to consolidate the updated team-level work plans, and produce the new overall project Work Plan that accurately reflects the latest Project changes.

2.1.3.3.   *Status Reporting*

GovConnect will provide status reporting on the C-IV Project through two different methods; orally at scheduled meetings, and through required written monthly status reports. As requested, GovConnect will attend weekly project management and team status meetings, monthly project management meetings, and monthly or periodic oversight, state and federal meetings to provide input on status issues as necessary.

The GovConnect Project Manager will require all GovConnect staff to produce a weekly status report related to their areas of support and responsibility. These internal GovConnect status reports will document work activities and major accomplishments achieved during the reporting period, in addition to any problems or issues that require attention. The GovConnect Project Manager will summarize these weekly reports as the basis for the required formal monthly status reports. Monthly Status Reports will be produced in a standard format and contain, at a minimum, the information outlined below.

- Reporting period,
- Date of the report,
- Summary of Project Management Activities Completed,
- Summary of Project Management Activities in Process,
- Summary of Project Management Activities Scheduled for this Period that were not Completed (and why),
- Summary of Project Management Activities Scheduled for the Upcoming Period,
- Summary of Deliverable Review Activities Completed,
- Summary of Deliverable Review Activities in Process,
- Summary of Deliverable Review Activities Scheduled for this Period that were not Completed (and why),
- Summary of Deliverable Review Activities Scheduled for the Upcoming Period,
- PCD Review and Assessment Report (includes the Work Plan Assessment Report and the review/evaluation of the Communication Plan)
- Issue Assessment Report,

- Risk Assessment Report,

- GovConnect Organizational Updates, and

- Other pertinent information.

2.1.3.4. *Issue Tracking and Resolution*

GovConnect will assist the Consortium in the identification, assessment, prioritization, tracking and resolution of major issues. GovConnect will employ issue management procedures that have been successfully incorporated during numerous other projects of like size and complexity. The goal of the issue tracking and resolution procedures is to identify, track, and resolve issues in a timely and efficient manner. Issues can arise from various stakeholders, risks, and work products at any point during the Project and must be identified, evaluated, understood and monitored through resolution. Based on extensive experience, GovConnect is aware of events and decision points that often result in issue generation. The knowledge of key issue 'triggers' enables GovConnect to work within the project management structure in a proactive manner to mitigate or quickly resolve many issues. Key events and decision points which often result in issue generation are identified below. GovConnect will monitor such critical decision points throughout the life of the Project to properly assess the possibility of applicable issues. These activities include but are not limited to:

- Completion of major tasks and transition from one major task to another which often triggers the need for reassessment of subsequent tasks, resources, timeframes and costs.

- Changes in the external environment such as new regulations, new policies, departmental reorganizations, etc.

- The consideration of requirements that were not identified in the original SOP

- Key decisions that include impacts to the major deliverables, schedule or budget, or that are cause for concern by members of the Project team.

Most issues arise from lack of clarity in, or different perceptions of, the intent of baseline documents. At project initiation, the baseline documents will be the Andersen contract, the scope of work, all requirements described by the C-IV SOP, and the proposal submitted by the Andersen Team in response to the SOP. As the Project progresses, requirements are verified, and corresponding issues are clarified, subsequent documents will supercede the SOP and proposal as the basis for scope management. As each of these documents are produced, issues may arise that will require review by Project Team members, or as appropriate, an organization of higher approval authority such as the C-IV Board of Directors. GovConnect will work with the C-IV Project Director and appropriate Consortium and Andersen team members to:

- Analyze issue databases and reports,

- Assess all high priority outstanding issues with respect to validity, prioritization, responsible parties, due dates, dependencies and impacts,

- Discuss and review possible resolutions,

- Identify any critical or overdue issues and recommendations for escalation.

GovConnect will address these factors in the *Issue Assessment Report* that will be completed as part of the overall *GovConnect Monthly Status Report*.

2.1.3.5.   Risk Management

Many risk factors can contribute to large system project failures, or significant cost and schedule overruns. A few of these risk factors include "scope creep," schedule deviation, lack of prompt issue resolution, and frequent changes among key personnel. Over the years that GovConnect has been successfully managing large-scale systems projects, it has learned that a major determinant for success is careful management of risk factors throughout the life of the Project. GovConnect's risk management approach provides a means of reducing or eliminating high-risk factors before they become obstacles to successful project completion.

In California and across the country, GovConnect has successfully assisted clients in identifying project risks, determining mitigation strategies, and implementing risk reduction measures. This success is due to GovConnect's ability to draw upon lessons learned and industry standards (such as IEEE) to shape and refine its risk management approach.

During this project, GovConnect will work with both the Consortium Management Team and the Andersen Team to provide on-going risk identification, assessment, and mitigation strategies. As an important part of risk management activities, GovConnect will assist the Consortium in completing the required quarterly DOIT Risk Assessment Model (RAM) Report.

The chart on the following page illustrates the flow of the risk management planning and control effort that GovConnect will employ.
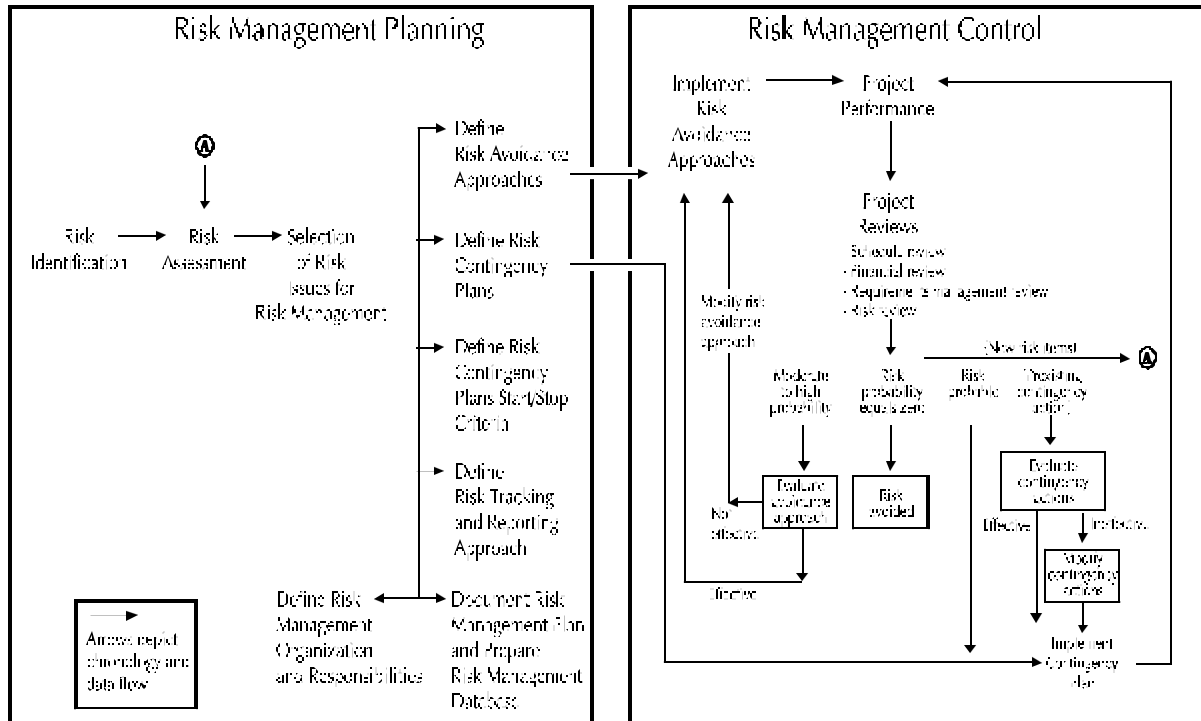
The risk management components illustrated in the flow chart are incorporated within the six major risk management steps that GovConnect will follow. These steps include:

1. **Identify Risks.** Sources of risk will be organized into categories such as customer risk, technical (product) risk, and delivery risk. Within each category, specific sources of risk will be identified to determine the type(s) of risk reduction technique(s) that are most appropriate.

   To accurately identify a risk and determine the best approach for mitigating it, GovConnect will use proven risk identification strategies, including:

   - **Checklists.** GovConnect will develop lists of key components that should be incorporated, or at a minimum considered, during the development of deliverables or other project processes. The checklist will be developed based on past experience, lessons learned, and industry best practices.

   - **Group process techniques.** As a key member of the C-IV Project, GovConnect will participate in many of the regularly scheduled and ad hoc meetings, as well as other daily activities. Through this normal interaction, GovConnect will become increasingly aware of problems, concerns, and issues as they arise. Drawing on this working knowledge, GovConnect will participate with the Consortium in periodic Risk Assessment meetings develop a consolidated view of risks that may affect the project.

   - **Analysis of the project assumptions.** GovConnect will analyze the assumptions on which project plans are based to determine whether or not they continue to be

applicable. As part of this effort, GovConnect will analyze the reasoning that led to decisions to confirm that it remains valid.

- **Analysis of areas of uncertainty.** GovConnect will analyze areas of uncertainty such as schedule impacts from interdependencies that are not well defined, potential problems related to interfacing systems, or functional or technical requirements that have not been adequately defined.

2. **Measure Risks.** To fully understand the potential ramifications of a particular risk, quantifiable measurements must be applied. Based upon years of successful management of projects with similar scope, RGS is able to provide reliable estimates of probability and costs for many identified risks. However, in situations where it is not possible to determine costs associated with a risk, RGS will assign potential losses on a numerical scale. In our approach to quantify risks, we use measurements of risk exposure and potential loss to define the extent of each risk. GovConnect will work with the Consortium management team to assign two types of measures to risks; potential loss (impact) and probability of loss (likelihood of occurrence). For each significant risk, GovConnect and the Consortium Management Team will develop an estimate of loss in terms of time, cost, or other factors, that might occur if the risk is fully realized. This estimate will gauge the potential loss and other exposure associated with the risk. GovConnect and the Consortium management team will also assign a probability, or likelihood of occurrence, to the risk. GovConnect will provide valuable input to this process that has been gained by managing risk during similar projects. When these types of risk measurement are viewed in combination, a level of exposure associated with each risk, and the project as a whole, can be more clearly understood.

3. **Prioritize High Risk Items.** After measurement, risks will be prioritized in descending order of total risk exposure. This step will highlight those risks with a combination of relatively high impact and relatively high probability of occurrence. GovConnect will maintain the results using a Risk Management Log.

4. **Develop Risk Management Action Plans.** Steps 1 through 3 culminate in the development of documented Risk Management Action Plans. The GovConnect project management staff will work with the Consortium Management Team to develop a Risk Management Action Plan for each high-risk item. GovConnect will ensure that each such plan is concise, action-oriented, easy to understand and easy to monitor. Each risk plan will identify who, what, why, when, where, how and at what cost. The development of C-IV Risk Management Action Plans will be based in part upon universal risk reduction strategies. Additional strategies will be employed that are tailored to meet the unique C-IV needs of the Project. A sample Risk Management Action Plan form is presented on the following page.

C-IV Project Risk Management Action Plan

Risk ID: *tracking number*	**Risk Description:** *brief, high-level description of the potential risk*
Risk Owner: *person responsible for tracking and updating action plan*	**Issue Date:** *the date risk was documented and tracking began through Action Plan*
Initial Risk Priority: *priority level set at point of risk identification*	**Updated Priority:** *changed priority level due to time and circumstances*

Analysis of Risk Exposure: *a description of the risk which includes some specific details of the areas of exposure to the C-IV Project*

Probability of Loss A percentile estimation of the likelihood of risk actually occurring	**Potential Loss** *An estimate of severity if the risk is realized based upon a scale of 1 – 10 (one is lowest and ten is highest)*	**Risk Exposure** (probability **X** potential) *The numerical product of probability of loss multiplied by the potential loss. Risk exposure provides a common basis for discussing and understanding the impact of various risks.*

Approach (how minimized and contingency plan): *A brief description of mitigation strategies that could be employed for each risk. If a risk is deemed unavoidable, not only mitigation strategies should be included, but also contingency plans must be identified.*

1.
2.

Deliverables, Milestones, and Responsibilities (what, when, who): *Identify specific deliverables and milestones most likely to be affected by risk. Those responsible for ongoing risk assessment and the implementation of mitigation strategies should be identified.*

1.
2.

Resource Needs: *Identify specific and or additional resource requirements needed to successfully implement the selected risk mitigation strategy.*

Status Updates: *brief description of mitigation strategies considered, and or employed*	Date:

5. **Integrate Risk Management Tasks into the Project Work Plan.** Integration of risk management tasks into the project work plan will occur in two ways. GovConnect will examine the Project Work Breakdown Structure (WBS) on periodic basis to identify components with which high priority risks are associated. GovConnect will also examine the relationship of those "high risk" components to others in the WBS to determine related impacts that may ripple throughout the WBS. Where appropriate, GovConnect will recommend the integration of specific risk management tasks within the WBS to reduce or eliminate the influence of high priority risks throughout the project. GovConnect will also periodically review the project Work Plan from a risk management perspective using a high degree of analysis to thoroughly understand impacts to the schedule and tasks. This review will focus on determining ways that the risk mitigation approaches, deliverables, or milestones (identified in the Risk Management Action Plans) can be included as specific tasks in the overall C-IV Project Work Plan. Including the risk management tasks in this way will ensure that they receive ongoing attention and that they are monitored for appropriate follow-through.

6. **Monitor the Status of Each Risk on an Ongoing Basis.** GovConnect will monitor all risks identified and documented in the Risk Management Action Plans to ensure progress is made towards eliminating or mitigating the risks. A summary of risk management activities will be included in the *Risk Assessment Report* portion of the monthly *GovConnect Monthly Status Report* (see Section 2.1.3.3). As appropriate, GovConnect will inform the C-IV Board of Directors of any critical risks to the System and the Project.

In combination with the preceding steps, GovConnect uses methods to minimize risks while maximizing quality outcomes. These methods include:

- **Customer Focus.** GovConnect ensures absolute focus on customer requirements and business objectives.

- **Defined Quality Requirements.** GovConnect believes that customer expectations for quality must be examined and quality specifications must be defined with the Consortium.

- **Rigorous and Optimized Processes.** GovConnect has defined and streamlined risk management processes which, when followed consistently and rigorously, lead to the desired end goals.

- **Standards and Procedures.** GovConnect believes that the project must use appropriate standards and procedures and ensure adherence to defined standards.

- **Maximum Empowerment.** GovConnect believes that each team member must be responsible for building in quality, by applying approved policies, procedures, and work instructions in accordance with the overall Quality System.

2.1.4. Additional Project Management Support

In addition to the standard project management activities described in Section 2.1.3, GovConnect will provide other specialized project management support, as requested by the Consortium. The following tasks will be completed on a regular basis and are therefore included within the overall scope, level of effort, and cost of the project management support services outlined in the GovConnect Work Plan.

- **Contract Compliance Assessment.** GovConnect will assist the Consortium Project Director and Contract Manager/Administrator in assessing whether Andersen is in compliance with all contract terms and conditions. Additionally, this task will include monitoring of all third-party hardware and software purchases, license agreements and maintenance agreements.

- **Participate in Consortium, State and Federal Meetings as requested.** The GovConnect Project Manager and other staff (as appropriate) will attend all required Consortium and stakeholder meetings as requested. GovConnect will serve as an integral part of ongoing communications and status updates to State and federal Stakeholders.

▪ **Budget Management and annual Implementation Advance Planning Document Updates (IAPDUs).** GovConnect will assist the Consortium Project Director and Contract Manager/Administrator in the tracking and management of the overall project budget as defined by the approved IAPD. The primary focus of the annual IAPDU is to report on the comparison of actual costs against those estimated in the baseline IAPD. On an annual basis, GovConnect will consolidate the updated project budget and status information and prepare the required IAPDU for submission to the State and federal stakeholders.

▪ **Review of Change Management Deliverables.** GovConnect will review the following Change Management deliverables to be produced by the Andersen Team.

- Change Plan

- Sponsor Goals and Expectations Report

- Communication and Involvement Plan

- County Strategic Direction Report

- Value Realization Plan

▪ **Additional IAPD Updates.** In cases in which C-IV is required to revise its IAPD more than once annually, GovConnect will assist in updating the document to reflect current project status and actual costs.

▪ **Change Order Analysis.** GovConnect will assist the Consortium in the analysis of any proposed change orders to the Andersen Contract and be a part of the change order team responsible for assessing the impact of each proposed change. GovConnect will review Change Order Requests with respect to scope, level of effort, resources, schedule, cost and impact to the existing work plan. Specifically, GovConnect will prepare a Change Order Response to:

- Identify and/or validate the tasks

- Identify and/or validate deliverables and milestones

- Estimate and/or validate the level of effort and resources required to complete the tasks

- Estimate and/or validate the schedule based on level of effort and resources

- Estimate and/or validate cost based on level of effort, schedule and resource requirements

- Analyze the impact of the proposed change on the existing Work Plan

2.1.5. Summary of the GovConnect Project Management Approach

The GovConnect team is proposing a proven project management methodology that will reduce the Consortium's risks and exposure with regard to the implementation of the C-IV System. This methodology has been used and refined over dozens of highly complex government technology projects. GovConnect will provide on-going support for PCD and Work Plan assessment, status reporting, as well as assistance in issue resolution, risk

mitigation, budget/IAPD management, contract management and change order analysis. Our approach is not intended to supplant the C-IV Consortium Management structure, but to add expertise and depth as needed by the Consortium. Our methodology is not static; in fact, it has been recently refined as a result of lessons learned on the LA LEADER Project. As a result, the Consortium Project Management Team can be assured that GovConnect has the people, the methods and the capabilities to meet or exceed the Consortium's expectations for this engagement.

2.2. DELIVERABLE REVIEW APPROACH

GovConnect's approach to deliverable review is simple, straightforward, based on cooperation and grounded in internationally accepted quality principles and processes developed by organizations such as IEEE.

To add maximum value to the Consortium, GovConnect will invest in the entire deliverable review process; as part of Deliverable Expectation Document (DED) development through submission of a recommendation for approval. GovConnect will work proactively to eliminate errors and rework early in the development process, resulting in the delivery of reliable, high quality products to the Consortium. GovConnect's level of involvement will vary based on the Consortium's requirements which are described in the Agreement, the Consortium's business and technical needs of which GovConnect is aware from its prior consulting for the SAWS Consortium IV project, and the scope and complexity of each deliverable to be reviewed, but at a minimum will include:

- Input to and assessment of DED development;

- Participation in general and detailed design sessions and related weekly status meetings;

- Participation in planning meetings for site preparation and installation, testing, training, conversion, pilot and implementation;

- Support to the Consortium in draft/interim deliverable reviews; and detailed formal review reports for identified, key Andersen deliverables; and

- Detailed formal review reports for identified, key Andersen deliverables to include but not be limited to the following:

  - Overall quality;

  - Summary of GovConnect Quality Assurance activities that went into the report;

  - Summary of any modifications already incorporated as a result of GovConnect activities;

  - Assessment of adherence to DED standards;

  - Requirements traceability matrix;

  - Comprehensive and specific comments, including a discussion of identified issues, deficiencies and suggestions for improvement; and

- Recommendation as to deliverable acceptability and any conditions linked to acceptance.

The successful completion of these tasks is based on internally and externally developed best practices that will include the comparison of C-IV to other welfare automation systems and accepted project management standards. GovConnect realizes that deliverables represent the evolution of a product from its initial DED definition of the format through early rough draft and work-in-progress stages culminating in the final version. GovConnect will work cooperatively with all Project staff to help ensure that deliverables will ultimately result in a System that will meet the defined requirements of the Consortium Counties.

GovConnect realizes that in a project as complex as C-IV, the deliverables take on a variety of forms. GovConnect has experience and expertise in working with the various deliverable forms and tools required for their review. Examples of the various C-IV deliverable types include:

- Project management related deliverables such as the PCD, Work Plan, and Issue Assessment.

- Functional and technical requirements validation documents that provide the basis for the C-IV design.

- Detailed program specifications that provide technical direction to programmers and need to be maintained to be current with the subsequent code.

- Coded programs, procedures, scripts, and applets that need to adhere to program specifications in an efficient and maintainable manner.

- Test plans, scripts, and results that need to confirm the design and its requirements, while test discrepancies are effectively cured, successfully re-tested and returned to the proper environment.

- Training plans and products that reflect the needs of the users and optimal operation of the system.

- Conversion plans for 34 existing county systems and data conversion software that must effectively transfer and close cases from existing systems to the new system without introducing duplicative or conflicting data.

- Installed hardware/software that must perform to defined certification requirements, and, as a whole system, meet or exceed the defined performance requirements.

GovConnect' goal is to make quality the *responsibility of each member of the Project team*, and to establish value-added standards and practices that will enhance the overall quality of all C-IV deliverables and the C-IV system as a whole. GovConnect will assist the Consortium in establishing specific quality objectives for each deliverable or work product to be produced, which will occur as a part of the DED development process.

The GovConnect approach to ensuring deliverables meet set standards relies on a continual process of defining, enforcing, and improving quality, which is integrated in each step of the review process.

2.2.1. Deliverable Review Objectives

The objectives of deliverable review are to ensure that all deliverables:

- Meet the Consortium's requirements;

- Are developed as agreed upon in the DED;

- Are comprehensive and complete;

- Support the development efforts appropriately;

- Provide an audit trail; and

- Are presented in a manner that can be easily used by all intended recipients.

2.2.2. Deliverable Review Tools

Where possible and appropriate, GovConnect will use the C-IV specific tools provided by the Andersen Team to support reviews. Automated tools will also be used for dissemination of findings and other information that result from the reviews.

2.2.3. Deliverable Review Methodology

As requested by C-IV, GovConnect has tailored its deliverable review approach to create a methodology for analyzing identified key Andersen deliverables.

In general, the GovConnect Team will assist the Consortium and Andersen Teams in defining and evaluating the format and content of identified key deliverables prior to the commencement of any further work on those deliverables. GovConnect will assign a coordinator to each key deliverable to provide Consortium staff with a single point of contact for all QA work associated with that particular deliverable. GovConnect will also communicate regularly with the Consortium regarding the schedule for review of concurrently developed deliverables. Such communication will ensure that Consortium staff are fully informed as to the number of deliverables that must be reviewed within limited timeframes.

Attachment B, GovConnect C-IV QA Deliverables, itemizes all Andersen deliverables that GovConnect will review, and includes the Andersen submittal date, the GovConnect Deliverable Review Report due date, and the Consortium review period for the Andersen deliverable.

This section describes the procedures RGS will use to ensure the accuracy and completeness of C-IV Project deliverables prepared by Andersen Consulting. The specific components involved in GovConnect's methodology for deliverable review include:

- Requirements Traceability Matrix;

- Deliverable Expectation Document (DED) Review;

- Deliverable Quality Reviews;

- Preparation of Deliverable Review Report;

- Deliverable Re-Review; and

- Quality Refinement.

These components are described in greater detail in the following subsections (Sections 2.2.2.1 through 2.2.2.5).

2.2.3.1.   Requirements Traceability Matrix

During the application requirements analysis task, GovConnect will develop a Requirements Traceability Matrix. When appropriate, the Matrix will be used as a resource for reviewing deliverables throughout development. This Matrix will document all SOP requirements and depict the link from the SOP requirement to the application software requirements. The Requirements Traceability Matrix will be updated during general and detailed design to address the evolving level of detail of the requirements. The benefits of the Matrix go beyond simply documenting application requirements. It can also be used to:

- Verify that all final deliverable documents (such as process models and data models) are included in the system specification;

- Identify requirements that are not addressed by configuration items during general and detailed design reviews;

- Identify extra configuration items that are not required;

- Validate that the scope of the Consortium testing effort includes scenarios for each requirement, and

- Provide input to change requests and future project plans when missing requirements are identified.

2.2.3.2.   Deliverable Expectation Document (DED) Review

As part of the initial Work Plan and PCD development process, and again at the beginning of each major task, the Andersen Team will submit a Deliverable Expectation Document (DED) to ensure that expectations regarding the deliverable are clearly defined and agreed to by all parties. GovConnect will ensure that the DED, which details the outline, format, and description for each project deliverable, will provide the basic standards for achieving quality performance and meeting the Consortium's requirements. GovConnect, in conjunction with the Consortium and Andersen Teams, will assist in the development of DEDs for project deliverables. GovConnect will base its input on accepted industry conventions, as well as experience gained during previous projects. As part of the DED development process, GovConnect staff will recommend modifications

that can improve the value of the DED in defining and achieving C-IV's requirements. GovConnect will also assist the Consortium in a re-review of the DED to ensure all required modifications have been properly incorporated.

2.2.3.3.   Deliverable Quality Reviews

Once standards of quality are developed and communicated to all staff, the process of ensuring quality begins. Different teams of Andersen, Consortium, and GovConnect staff will be involved in deliverable quality reviews.

The quality involvement by the Andersen Team includes:

- **Self Review.** Each team member is responsible for his/her own work. Any individual responsible for a deliverable or deliverable component will use a quality assurance checklist to evaluate the readiness of the deliverable. This checklist will contain the standards for that specific deliverable as delineated in the DED. The individual will measure the deliverable against the checklist standards until all conditions are met.

- **Team Lead Review.** As the second level quality review process, all design and development deliverables generated by team members are subject to reviews by the responsible Team Lead. The Team Lead will be charged with ensuring that all team members have complied with all DED requirements.

To facilitate the deliverable quality reviews, GovConnect will establish two general types of teams. The roles of these teams are as follows:

- **Quality Assurance Team.** GovConnect QA staff will review project deliverables in progress and will solicit feedback from Consortium staff by including them within Quality Assurance Teams. GovConnect will guide these teams by establishing the scope of review, assessment criteria (based on DED standards), percentage of work to be reviewed, procedures for documenting review results, and recommendations for corrective actions. GovConnect will also develop and use checklists for each project deliverable to guide a structured review of requirements as delineated in the approved DED.

- **Joint Team.** Specific project deliverables are subject to a structured walkthrough before a team comprised of Consortium and GovConnect staff. Consortium staff will be chosen for Joint Teams based on their qualifications to evaluate the specific product.

The Quality Assurance and Joint Review Teams will complete the following three types of reviews to ensure comprehensive assessments of contractor deliverables:

- **Interim Deliverable Review.** Once segments of each deliverable (as identified in Attachment B) are completed by the Andersen Team, GovConnect will review them. The interim deliverable review, involving inspection of only a portion of the final deliverable, will ascertain the validity of the approach being applied to develop the deliverable; as well as, the contents of the segment prior to its formal submission. It will also enable GovConnect to identify potential defects in the deliverable early in

the process. As a result, the Andersen Team will have the opportunity to take corrective action before additional time and resources are expended in the review and development of the deliverable. By conducting an interim review of the deliverable and soliciting feedback from Quality Assurance Teams that include Consortium staff, GovConnect will ensure that a more accurate, complete version of the deliverable can be prepared for formal submission. This approach will expedite the final review and approval process.

▪ **Structured Walkthroughs.** For the more complex deliverables, a structured walkthrough will be conducted for Joint Review Teams (consisting of Consortium and GovConnect staff) as the deliverable is submitted for review. The purpose of this step is to orient all reviewers to the content of the deliverable in order to expedite the review process. Additionally, any aspects of the deliverable requiring further clarification may be discussed at this time.

▪ **Detailed Deliverable Review.** All formal deliverables completed by the Andersen Team will be submitted to the C-IV Project Director for review. The deliverable standards as defined in the DED will serve as the evaluation criteria to ensure that each deliverable is reviewed for completeness, accuracy, level of detail and quality.

The Project Director will promptly notify the designated Consortium reviewers and GovConnect (for the deliverables outlined in Attachment B) that the deliverable is ready for review. Deliverable review will begin immediately by both Consortium reviewers and GovConnect reviewers (where appropriate). Many deliverables will have already been reviewed in draft form by Consortium and GovConnect staff at this point, as the GovConnect methodology calls for submittal of interim sections of each deliverable when possible. As a result, the contents of most final deliverables should be at least somewhat familiar to C-IV staff, and the final deliverables should reflect C-IV staff comments on individual components.

Once GovConnect completes its review of each deliverable (identified in Attachment B), it will generate a Deliverable Review Report (see Section 2.2.3.3) for formal submission to the C-IV Project Director. The Consortium Team will review the GovConnect Deliverable Review Report to determine whether the entire report, or components of the report, will be communicated to the Andersen Team.

Consortium staff will have a defined number of business days, ranging from 5 to 20, as specified in the Andersen C-IV Project Work Plan, to review the Andersen deliverables. GovConnect will work cooperatively with the Consortium to review the interim, draft and final Andersen Deliverables. GovConnect will document the results of this review in the GovConnect Deliverable Review Report. When the Consortium accepts a GovConnect deliverable, the C-IV Project Director will authorize the approval in writing. If the deliverable is unacceptable, the C-IV Project Director will formally notify the appropriate party, and will include a description of each of the deficiencies, issues and conditions that must be corrected or resolved prior to resubmission.

2.2.3.4. Preparation of Deliverable Review Report

GovConnect will complete a Deliverable Review Report for each Andersen deliverable identified in Attachment B. These reports will provide the Consortium with documentation of the review process and the results. Specifically, the Deliverable Review Reports will document:

- Overall quality of the deliverable;

- GovConnect Quality Assurance activities that were undertaken for deliverable review;

- Modifications to the deliverable already incorporated as a result of GovConnect activities;

- Assessment of the deliverable's adherence to DED standards;

- Congruence to the Requirements Traceability Matrix;

- Comprehensive and specific comments, including a discussion of identified issues, deficiencies, and suggestions for improvement; and

- Recommendation as to deliverable acceptability and any conditions linked to acceptance.

2.2.3.5. Deliverable Re-review

Once the deficiencies and issues associated with each deliverable have been addressed by Andersen, the deliverable will be re-submitted for the C-IV Project Director's re-review and approval. GovConnect will assist in the re-review of the deliverables (identified in Attachment B) to validate that all identified deficiencies have been corrected. If deficiencies are not sufficiently corrected in these deliverables, GovConnect will document the outstanding deficiencies by revising the appropriate section(s) of the Deliverable Review Report. GovConnect will continue to assist the Consortium with the iterative review process until the deliverable is acceptable by meeting all applicable requirements.

2.2.3.6. Quality Refinement

Producing quality products involves more than just correcting problems after they are identified; it involves preventing problems from occurring as part of work-in-progress. As staff address existing and potential concerns, it is crucial that solutions are shared and set in place so that similar issues can be avoided. The GovConnect team will contribute to quality refinement through:

- **Communication.** It is important that all parties involved in a project be thoroughly informed. Issues in one area may impact another area, or may be similar to issues confronted by other project members. Sharing concerns and solutions provides all staff with a greater capability for quick recognition and resolution of potential problems. The GovConnect Team will actively foster the Consortium's involvement

in quality refinement by maintaining ongoing and detailed communication with the Consortium, both formally and informally. Primary forms of communication are through status reports and regular meetings.

▪ **Documentation Updates.** As solutions are developed it is important that they be shared with all staff members so that they can be applied to similar situations. This reduces the likelihood of problems being repeated during the Project. All responses to project issues will be shared with staff members. Whenever a response/resolution affects standards or other documentation, those items will be updated immediately by their owners. Project members will be alerted to any changes that affect general work procedures or standards and will be expected to implement those changes immediately.

▪ **Issue Resolution.** In most cases, quality is maintained by reviewing products against developed DEDs, standards and prior deliverables (e.g., ensuring that a logical system design deliverable meets or exceeds the system objectives set forth in a requirements definition deliverable) and addressing discrepancies. But even well designed, mutually agreed-upon standards may not address all concerns.

In situations in which quality requires further definition, GovConnect will use a systematic issue resolution process. As part of the deliverable review process, deliverable quality issues will be entered into the Project's issue tracking system and an issue resolution coordinator will track progress toward resolution. In addition, GovConnect will actively work with Consortium and Andersen staff to facilitate resolution on a day-to-day basis. As resolution is reached on deliverable quality issues, GovConnect will also facilitate communication of the resolution to appropriate Project staff.

2.3. Independent Testing Approach

GovConnect will bring extensive experience in independent testing to the C-IV Project. GovConnect has managed and assisted with system/acceptance test planning, preparation, and execution for several large-scale projects. The GovConnect approach to Testing for the C-IV project draws upon the IEEE 1012-1998 V&V standards at an integrity level 4 and complements them with historically proven and cost effective methods and procedures for testing new systems development in the Human Services arena. GovConnect's independent testing services will provide the Consortium with an independent verification of key portions of the software and system to determine that requirements (functional and technical) have been satisfied, and that the system functions as intended.

The goal of independent testing is to:

▪ Detect and correct software errors in key portions of the system as early as possible;

▪ Provide management with additional insight into the test process and application related risks;

- Establish a basis for assessing the completion of each test phase;

- Ensure compliance with stated performance and functional requirements; and

- Provide a basis for the recommendation to proceed with implementation.

As an initial step, GovConnect will work with the Consortium Team to ensure that a comprehensive test plan is created, well-defined test scenarios are developed, and a process exists for documenting results. Once the Project's test plan is established, GovConnect will create its own test plan for and conduct *independent* tests of key sections associated with Releases 1, 2, and 3. These tests will primarily focus on areas of system development that are functionally complex, time critical, error-prone, or in which critical dependencies exists (i.e., key external interfaces). *It is important to note that GovConnect independent testing activities will be conducted independently, but simultaneously, with the Project's overall integration (system) testing and user acceptance testing efforts.*

The specific activities involved in GovConnect's independent testing effort are as follows:

- **Develop the GovConnect IV&V Test Plan.** GovConnect will develop a test plan for the execution of the independent system test that will serve as a guide for the GovConnect test team. The IV&V Test Plan will:

  - Describe the overall testing strategy GovConnect will employ during the testing phase, including approaches, methods, and techniques for analyzing test results;

  - Document the GovConnect System and User Acceptance Test schedules;

  - Contain detailed descriptions of the GovConnect System and User Acceptance testing activities for each of the three releases;

  - Describe the roles and responsibilities of the GovConnect test team members;

  - Document test procedures to be used by the GovConnect team, including procedures for:
    - ♦ Test setup and/or initialization procedures;
    - ♦ Specifying the test components for each IV&V test which may include when appropriate:
      - Test inputs,
      - Expected results,
      - Test pass/fail criteria,
      - Testing tasks, and
      - Approval and signoff of successfully completed tests.

  - Describe the System and User Acceptance Test environments and tools to be used in automated testing, including performance testing;

  - Document the requirements in the form of a requirements traceability matrix;

  - Describe the processes for validating test data;

- Document plans for System Test witnessing;

- Include scenarios/conditions for all of the focused tests to be performed independently by GovConnect;

- Describe initial GovConnect recommendations for the management and execution of the Consortium's User Acceptance Testing;

- Outline the monthly testing status reports to be provided by GovConnect; and

- Outline the Final Test Report to be produced by GovConnect at the end of testing.

- **System Test.** GovConnect will independently evaluate key portions of the Andersen System Test effort from a functional and technical perspective to determine if the system is ready for User Acceptance Testing. GovConnect will create and strictly follow a structured test approach and implement signoff procedures to document accountability. GovConnect will also employ proven V&V methods, such as test witnessing, which will not impact the progress of the System test effort. The specific process for GovConnect's independent system testing will include:

  - *Review and confirm test environment and tool configuration.* GovConnect will review the test environment and tool configurations, as necessary, to verify efficient and consistent testing.

  - *Validation of the test data.* GovConnect will verify that the source and reliability of the data files used in the System Test effort are representative of the actual production data.

  - *Assessment of tools.* GovConnect will review Andersen's use of automated tools, as necessary, to verify consistent testing.

  - *Performing System Test Witnessing.* Test witnessing involves monitoring the fidelity of test execution to the specified test procedures and witnessing the recording the test results. GovConnect will perform system test witnessing to determine if the software satisfies the criteria established in the test plan and Requirements Traceability Matrix (initially developed during application requirements analysis) and if it is of sufficient quality to begin User Acceptance testing. GovConnect will review user documentation, system test procedures, and system test results.

  - *Documenting Results and Anomalies.* GovConnect will document the results as required by the test plan and will identify discrepancies between actual and expected test results.

  - *Assess Readiness of System to Proceed to UAT for Release 2.* GovConnect will provide a formal recommendation to the Consortium regarding whether the system is complete and stable enough to proceed to Release 2 UAT.

- **User Acceptance Test.** Acceptance testing provides the means to determine if the System satisfies all documented requirements and is ready to be implemented. GovConnect will develop Acceptance Test Plans and Cases (scenarios) in accordance with key project requirements identified in the Requirements Traceability Matrix.

During this stage, GovConnect testers will identify key portions of the system that do not correctly reflect the user's key acceptance requirements. Any discrepancies will be communicated to the Andersen Team for correction. Once corrections have been made, GovConnect will re-test the software.

In general, GovConnect will follow the same process during Acceptance Testing as was followed during System Test. In addition to that process, GovConnect will complete other key activities as part of its independent acceptance testing effort. These additional activities include:

- *Conducting a traceability analysis.* Utilizing the Requirements Traceability Matrix developed during application requirements analysis and updated during general and detailed design, GovConnect will document the requirements to be tested. The Requirements Traceability Matrix will also be used as a resource to determine the percentage of application functionality that is available and ready for testing.

- *Executing tests.* GovConnect will execute pre-defined acceptance test procedures and metrics. The tests that will be executed for UAT will be comprised of the key portions of the following:
  - **Time critical or time sensitive processes.** This encompasses unique online and batch processes for cutoff such as notices of termination and financial components such as the benefits issuance interfaces.
  - **Decision tree testing.** GovConnect will perform decision tree testing of key eligibility determination and benefit calculations.
  - **Performing key "white box" testing of MEDS and the financial interfaces.** White box testing builds upon the knowledge of the internal workings of the application to test key or critical possible combinations of data that will exercise each line of code within the program.
  - **Testing key converted cases.** Key case information and data that is not manually added through the C-IV application will be tested to determine if each conversion program appropriately loads the database with non-corrupt data and that each case can be maintained within the C-IV application.
  - **Performance Testing.** An important facet of comprehensive system and User Acceptance Testing is performance testing. GovConnect will independently evaluate performance tests to determine if the C-IV System meets all performance requirements as set forth in the SOP. The performance tests will be conducted near the beginning of User Acceptance Test for Release 2; at this point, the system will contain approximately 95% of all functionality, and having completed the system test phase, should be relatively stable. This allows for the assessment of results and for Andersen to perform tuning and configuration refinements prior to Pilot. GovConnect will evaluate both normal and peak processing conditions in the following key performance areas:
    - Online response time
    - Batch response time
    - Print initiation response time

- Workstation and server CPU and memory utilization
- Database server disk utilization and input/output throughput
- Network utilization
♦ **Regression Testing.** GovConnect will also perform regression testing in UAT to verify that changes are made to any previously examined software products are re-tested. If a failure occurs during the testing process, GovConnect will assess the failure to determine potential ripple or side effects and impacts on other aspects of the system and execute regression testing on all software affected by the failure. The cycle of changes and re-testing will continue for the duration of the GovConnect Testing effort.

- *Document results and anomalies.* GovConnect will document the results as required by the test plan, identifying discrepancies between actual and expected test results. GovConnect will identify and report on all trends, patterns, and distribution of defects; such as:

  ♦ Defects found and missed;
  ♦ Age of defects found;
  ♦ Number of rework cycles;
  ♦ Test coverage; and
  ♦ Defect finding rate.

  As necessary, GovConnect will make recommendations for correcting or preventing any identified problems. Any recommendation will be documented in the Monthly Testing Status Reports and Final V&V Test Report to ensure clear communication with key stakeholders.

- *Assess Readiness of System to Proceed to Pilot for Release 2.* GovConnect will provide a formal recommendation to the Consortium regarding whether the system is complete and stable enough to proceed to Release 2 Pilot.

▪ **Consortium UAT Support.** In addition to the independent testing, GovConnect will assist the Consortium in the planning and execution of its User Acceptance Test (UAT) effort. GovConnect will provide guidance and leadership in prioritizing the work and enhancing productivity for the Consortium. This will complement the GovConnect independent testing effort. It will also maximize the value of the overall Integration (System) and Acceptance V&V Test to the Consortium by ensuring the thoroughness of the entire testing effort and providing insight and experience to Consortium staff.

▪ **Monthly Testing Status Reporting.** GovConnect will report monthly on the status of its testing activities, findings, and immediate recommendations. The testing status will be reported through two different methods; 1) orally at scheduled meetings and 2) through required written monthly status reports. The Monthly Status Reports will be produced in a standard format and contain, at a minimum, the information outlined below.

- Reporting period,

- Date of the report,

- Summary of Testing Activities Completed,

- Summary of Testing Activities in Process,

- Summary of Testing Activities Scheduled for this Period that were not Completed (and why),

- Summary of Testing Activities Scheduled for the Upcoming Period,

- Testing Issues

- Testing Risks,

- Recommendations (if immediate action is required), and

- Other pertinent information.

▪ **Final IV&V Test Report.** GovConnect will prepare a comprehensive Final IV&V Test Report to ensure clear communication with key stakeholders; both within and external to the project. GovConnect will document the final outcomes of its independent activities during System Test and UAT. The report will be prepared from GovConnect's independent perspective and will provide an additional basis for the Consortium's final sign-off an acceptance of testing results. This report will clearly communicate GovConnect's recommendation as to whether to proceed with implementation.

3. GOVCONNECT DETAILED APPROACH TO PROJECT TASKS

This section contains GovConnect's detailed approach to completing its project tasks. Throughout the project, GovConnect will provide ongoing support to the Consortium in the areas of project management, deliverable reviews, independent testing, and other tasks throughout the 42-month C-IV Project. GovConnect will perform all project management support tasks as identified and described in Section 2.1 and will adhere to the Deliverable Review Approach, as detailed in Section 2.2, to review deliverables (as identified in Attachment B) and prepare formal deliverable review reports. During the testing phase, GovConnect will follow its Independent Testing Approach, as outlined in Section 2.3, to determine the extent to which key components of the system meet the requirements and function as intended. Again, this approach draws upon the IEEE 1012-1998 V&V standards at an integrity level 4 and tempers them with historically proven and cost effective methods and procedures for systems development in the Human Services arena.

The remainder of this Section addresses each of the major C-IV Project tasks as defined in the SOP and Andersen's final proposal and contract with the corresponding Quality Assurance activities to be completed by GovConnect. These tasks include:

- Project Management,
- Site Preparation,
- Telecommunications Design and Installation,
- System Development and Testing,
- Training Design and Development,
- Conversion,
- Consortium-wide Implementation, and
- Initial Maintenance and Operations.

The GovConnect Quality Assurance Project Work Plan includes all necessary tasks and deliverables to meet the Consortium's requirements for project management support, deliverable review, and independent testing services. This Work Plan will be updated during Project initiation to coincide with the overall C-IV Project Work Plan and start date. GovConnect will continually revisit and update the GovConnect QA Work Plan to ensure that it reflects changes as they occur. The detailed GovConnect QA Project Work Plan is included as Attachment A.

3.1. TASK DESCRIPTIONS

3.1.1. Task 1 – Project Management

Section 2.1.3, Project Management Support Methodology, and Section 2.1.4, Additional Project Management Support, describe the approach and tasks for providing project management support services. For that reason, the tasks are listed below for convenience, but the description for each of these tasks will not be repeated. As part of ongoing project management support, GovConnect will:

- Review and evaluate the Project Work Plan;

- Review and evaluate the Project Control Document (PCD);

- Prepare Monthly Status Reports;

- Assist in Issue Identification, Assessment, Tracking and Resolution;

- Assist in Risk Management;

- Assist in Contract compliance assessment;

- Assist in Budget Management and preparation of annual Implementation Advance Planning Document Updates (IAPDUs);

- Participate in Consortium, State, and federal Meetings as requested;

- Assist in development of additional as-needed IAPDUs; and

- Perform Change Order Analysis.

Additionally, as part of the Project Management task, the GovConnect Team will perform the review and analysis of the following Change Management deliverables produced by the Andersen Team.

- **Change Plan.** GovConnect will review and recommend changes needed to the Change Plan to ensure it includes a comprehensive and thorough assessment of the current operating environment in each County, establishing the basis for all further change management activities.

- **Sponsor Goals and Expectations Report.** GovConnect will review and recommend changes needed to the Sponsor Goals and Expectations Report to ensure the current environment was adequately analyzed, the Counties' readiness for change was assessed, key stakeholders and preferred communication channels were identified, and the goals and expectations of each of the Consortium's leaders were confirmed. GovConnect will review the report to determine if the methods the Andersen Team will use to build and sustain sponsorship throughout the phases of the project, facilitate decision-making when issues arise, and work to build a cohesive project team are appropriate and adequate.

- **Communication and Involvement Plan.** GovConnect will review and recommend changes needed to the Communication plans to ensure:
  - All levels of County staff have been adequately included;

- The methods proposed can be used to keep all stakeholder groups informed of the C-IV Project's progress;

- A change network, involving people from each County, has been established to facilitate knowledge sharing and feedback; and

- Metrics have been established for future monitoring of activities to ensure the plan is working.

▪ **County Strategic Direction Report.** GovConnect will review and recommend changes needed to this report to ensure it fully describes logical and real outcomes and impacts associated with each County's strategic direction and sets forth an approach to implementing solutions to mitigate negative outcomes and impacts.

▪ **Value Realization Plan.** GovConnect will review and recommend changes needed to the Value Realization Plan to ensure:

- Methods for evaluating the meeting of performance targets identified in the previous activity have been established.

- Changes needed to achieve the C-IV performance improvement targets have been identified for individual Counties.

- The value of the C-IV System to each County has been articulated. GovConnect will analyze the stated value in terms of true costs of implementing the program, translation of performance improvement targets to benefits, and identified key drivers to ensure the benefit to cost ratio is optimized.

- The individual County performance improvement opportunities have been synthesized to identify those that will be common for the Consortium and those that are unique to an individual County.

- The statement of work and release strategy were based on the results of the business case and value proposition.

- A plan has been developed to achieve the performance targets identified, focusing on risks, accountability, and performance measures.

Major Deliverables: Monthly Status Reports 1-41
Review of the Updated Project Work Plan
Review of the Project Control Document (final format)
Review of the Project Control Document Updates 1-41
Review of the Change Plan
Review of the Sponsor Goals and Expectations Report
Review of the Communication and Involvement Plan
Review County Strategic Direction Report
Review of the Value Realization Plan

3.1.2. Task 2 – Site Preparation

During this task, the production data center, development data center, application development site, training sites, and the C-IV County local sites are prepared to receive hardware and software. In each case, a Site Survey is completed to evaluate the existing condition and objectives for each site. A Site Evaluation is then performed to determine the changes and upgrades necessary to prepare the site for the C-IV system. After approval of the recommended changes, each site is configured for installation of standard C-IV hardware and software and inspected for compliance. During the Site Preparation task, GovConnect's role will be to evaluate and recommend changes needed to the site preparation plans for each County to ensure that each plan contains:

- A thorough infrastructure analysis;

- All hardware and software specifications for all configurations;

- A detailed and realistic schedule for site preparation, installation and de-installation that spans from ordering and receiving equipment to providing installation completion certificates.

- Sufficient resources allocated to site preparation, installation and de-installation;

- A detailed equipment list (e.g., hardware, software, wiring) for each site; and

- Clearly defined roles of the Andersen Team and the Consortium.

Major Deliverables: Site preparation review for San Bernardino
                          Site preparation review for Stanislaus
                          Site preparation review for Merced
                          Site preparation review for Riverside

3.1.3. Task 3 – Telecommunications Design and Installation

This task encompasses the design and installation of the new telecommunications network needed to support the C-IV System and includes the design and installation of the Wide Area Network (WAN) and the various Local Area Network (LAN) configurations. Design aspects cover activities such as analysis, selection, configuration, and testing, while the installation aspect includes physical coordination activities required to install hardware in the environment. GovConnect will analyze Consortium requirements, performance and reliability capabilities, application of specific technologies and tools, and County characteristics. Where appropriate, GovConnect will suggest methodologies and solutions to achieve or improve network efficiency and response time requirements; particularly those that impact the business capabilities of the Consortium. Specifically, GovConnect will:

- **Review the Telecommunications Conceptual Design.** GovConnect will review and recommend changes needed to the telecommunications design to ensure that it meets the requirements stated in the SOP, the proposal, requirements and design sessions and applicable DED. The Telecommunications Conceptual Design requirements will

be included in the Requirements Traceability Matrix to ensure that these requirements are assessed in detail prior to the implementation of the system.

▪ **Review the Network Detailed Design.** GovConnect will review the detailed designs for the network environment, including diagrams and specifications. Network and system models will be reviewed and changes recommended to ensure the accuracy of the design and assumptions. Particular attention will be given to assumptions related to each transaction's timing, volume, and size and the mix of selected transactions. In this review, GovConnect will analyze and recommend changes to the:

- Design to ensure it meets and supports C-IV technical requirements;

- Results of the traffic and trend analyses to the overall telecommunications design to ensure load and speed requirements can be met;

- Ability to achieve reliability and speed requirements (which are generally a combination of the design and configuration of application software, system software, and the network);

- Applicability of the conceptual designs to each individual site and adjustments made to accommodate each site's specific needs;

- The WAN design for:

  ♦ Router configurations for each specific site;
  ♦ Router models for each site, along with memory and management configuration;
  ♦ The configuration of the backbone nodes to ensure proper communication can occur between all of the devices;
  ♦ Circuit and router failover information to ensure redundant paths exist in the event a link fails;
  ♦ Integration points to the legacy infrastructure to ensure appropriate communication to the existing systems occurs where applicable; and
  ♦ Completeness and usability of the procedures associated with performance and integration testing and the appropriate tools.

- The LAN design for:

  ♦ Networked applications and operating system configurations for each office category;
  ♦ The development of WINS/DNS (Windows Internet Naming Service/Domain Name Server) and DHCP (Dynamic Host Configuration Protocol) configurations on a County basis and the redundant domain controller configuration;
  ♦ Print server and queue information to ensure they meet the specific needs of each site;
  ♦ The applicability of the toolset used for NT management to give administrators and operators the appropriate level of environment control;
  ♦ The integration of legacy networked applications using NT server for each County;

♦ Test plans that address performance and integration issues and ensure the design configurations work as planned;

♦ LAN topologies that address the physical and logical LAN segments within each office.

♦ Wiring layouts between the main and intermediate distribution frames (MDF and IDF) that coincide with the detailed design; and

♦ Specific designs for the various LAN switches in the environment.

• Configuration of, and testing methods for, the various infrastructure products;

• Performance and integration test plans to determine that issues have been addressed so the WAN and LAN meets the design specifications after installation; and

• Adequacy and growth potential of the proposed network.

The Network Detailed Design will be included in the Requirements Traceability Matrix.

▪ **Review Telecommunications Installation Plan.** GovConnect will review and recommend changes to the Telecommunications Installation Plan, which details when and how the network environment will be installed, to enhance the effectiveness of:

• Processes for ordering and tracking equipment for the network environment,

• A detailed equipment list identifying all network hardware and software for each site; and

• Configuration and testing methods and processes that must be executed to ensure that the hardware and software is installed properly and it meets the requirements put forth in the design process, as well as specific certification requirements for operability;

• Schedule for installation, including the appropriate coordination with all County points of contact;

• Allocation of skilled resources to ensure that the installation can be accomplished quickly and effectively, and with the intent of minimizing any disruption to County offices and staff;

• Plans for deploying equipment to each site, including shipping and receiving methods and processes, and whether any equipment or software will be stored in County facilities prior to installation and certification; and

• The acceptance review process that will be conducted to analyze each County's installation.

The Telecommunications Installation Plan will be included in the Requirements Traceability Matrix.

▪ **Review Telecommunications Installation.** During the installation period, GovConnect will review and recommend changes to selected sites to ensure the actual installation of the telecommunications equipment mirrors the approved

Telecommunications Design and meets all C-IV technical requirements. These reviews will focus on the larger sites where a greater number of users and PCs place greater demands on the WAN and LAN infrastructures. GovConnect will also determine if the installation effort followed the Installation Plan and was completed according to the agreed upon schedule, resource allocation, and standards. For each selected site, GovConnect will analyze:

- The specified performance parameters;

- Network availability;

- Comprehensiveness in servicing all required locations;

- Redundancy;

- The adequacy of proposed network management processes, procedures and related documentation; and

- The ability to accurately perform network diagnostics and resolve problems.

GovConnect will also review and recommend changes to the installation to ensure that:

- All infrastructure equipment has been received and captured under the asset management system;

- A "virtual" version of a specific Consortium office was built in the factory according to the detailed design that was developed for the particular office;

- The configuration and equipment was tested to verify that all functionality and equipment is operable;

- Test results and installation instructions were documented for review by the Consortium and use by the field installation teams;

- The equipment and software was shipped to the designated office;

- The equipment and software was installed in the office according to the detailed design for the site;

- The verification test was re-executed by the field installation team and the results documented; and

- Any test discrepancies were resolved.

▪ **Co-Review the Acceptance of the Infrastructure with the Consortium.** After the Telecommunications network has been installed in all four counties, GovConnect will work with the Consortium to review the Telecommunications Infrastructure and confirm that all requirements have been met in each County.

Major Deliverables: Review of the Conceptual Telecommunications Design
Review of the Network Detailed Design
Review of the Telecommunications Installation Plan
Review of the Telecommunications Installation in Merced County

Review of the Telecommunications Installation in Riverside
Review of the Telecommunications Installation in San Bernardino
Review of the Telecommunications Installation in Stanislaus
Co-Review the Acceptance of the Infrastructure with the
    Consortium

3.1.4. Task 4 – System Development and Testing

To initiate system development, the Andersen Team will utilize its Business Integration Methodology (BIM) to analyze, design, and develop each functional release of the C-IV application. An initial analysis phase will be conducted to analyze and confirm the C-IV Business Model and verify the functional and technical requirements needed to support the Business Model.

Following the initial analysis, the Andersen Team will work with the Consortium, through the application design process for each release, to design the application while continuing to refine the analysis. During the application development stage for each release, the elements of each business function will be constructed and documented. During the application test stage, these elements will be tested to validate that the C-IV System functionality and usability requirements are met. Each release will go through the same design, build, and test development cycle.

Throughout this stage of the project, GovConnect staff will review and recommend corrections and changes to the Andersen system development deliverables (See Attachment B for the detailed list of deliverables that will be reviewed by GovConnect) to ensure the deliverables meet the functional and technical requirements of the C-IV system in understandable, agreed upon terms, and as stated in the SOP, the proposal, requirements and design sessions, the DEDs and the Agreement between Andersen and the Consortium. GovConnect will support the Consortium's technical and functional teams to ensure complete understanding of the design, development, test, and acceptance of the Project deliverables.

GovConnect will review and recommend corrections and changes to each deliverable (identified in Attachment B) utilizing the approaches and methodologies described in Section 2.2. Generally, the support provided by GovConnect will include:

- Participating in requirements analysis and design sessions. This activity includes working to ensure that the Project scope and requirements are clearly articulated and well documented, and that the design meets stated requirements.

- Assisting with the issue resolution process. GovConnect will work with the Consortium and the Andersen Team to define the scope of issues, analyze alternative courses of action and their respective impacts, and offer recommendations for resolution.

- Reviewing application development deliverables (identified in Attachment B), documenting deficiencies, and participating in meetings (when appropriate) to resolve the deficiencies so that the final product will meet specifications.

- Testing the application software, documenting results, and identifying problems in System Test.

- Acting as a major resource for the Consortium's development of an Acceptance Test Plan and acceptance testing scenarios.

- Supporting the Acceptance Test activity by performing independent tests, documenting results, identifying and prioritizing problems, and performing regression testing.

In short, the GovConnect effort during system development will consist of four major subtasks: 1) reviewing key Andersen Team Deliverables (identified in Attachment B), 2) conducting Independent Testing, 3) supporting the Consortium's User Acceptance Testing effort, and 4) submitting Monthly Status Reports on the Testing effort. The specific subtasks that GovConnect will complete during System Development are delineated in the following subsections.

3.1.4.1. *Review of the Andersen Team Deliverables*

Utilizing the process referenced in the opening description of this task, and described in detail in Section 2.2, GovConnect will review the deliverables (identified in Attachment B) in the following two categories:

1. **Development Deliverables.** GovConnect will review the following Andersen Team development deliverables:

   - **High Level Project Data Model**. The Logical Data Model will be reviewed to determine that the required data element and definitions are included. The evaluation will include assessment of the Entity Relationship Diagram (ERD) and the Data Repository.

   - **Application Requirements Analysis.** GovConnect will attend requirements validation sessions to provide supplemental knowledge of requirements by offering a historical perspective, or by adding clarity and intent of the C-IV requirements. This support will prove invaluable, especially in those sessions that are attended by staff that are "new" to the Project. GovConnect will review draft or interim versions of these deliverables, as they become available, to evaluate the adequacy and ability to meet the application requirements. GovConnect will assess the adequacy of the application requirements, identify any deficiencies, and recommend resolutions to ensure compliance with the Consortium's requirements or federal, State, and County rules and policies. GovConnect will review the application requirements analysis for each of the five (5) Business Areas and 58 processes in the C-IV Business Model and verify the application functionality required to support the Business Model. As part of this analysis, GovConnect will review:

     ♦ **Business Requirements (Requirements Traceability Matrix).** GovConnect will review the business requirements as they are collected and documented by the Andersen Team. GovConnect will develop a Requirements

Traceability Matrix to track business requirements throughout the development process.

♦ **Business Performance Model.** GovConnect will review each performance measurement identified in the business performance model, with emphasis on key performance indicators.

♦ **Business Process Model.** Business processes will be identified and traced to the business process identified in the SOP.

♦ **User Interaction Model.** GovConnect will review and recommend changes to the User Interaction Model to ensure it properly represents user workflow and meets practical usability standards.

♦ **User Interface Standards and Guidelines.** GovConnect will review and recommend changes to these standards and guidelines to ensure the User Interaction Design can be appropriately documented and that the User Interface meets or surpasses the practical threshold for usability.

♦ **Human Performance Support Requirements.** GovConnect will review and recommend changes to these requirements to ensure that the needs of the Consortium will be met. The review will include all processes and procedures that will provide workforce performance support related to the C-IV application, such as integrated on-line help, computer based training, and on-line and paper-based user manuals.

• **Development Architecture Design.** GovConnect will evaluate, review and recommend changes to the Development Architecture Design (the technical environment that will be used to develop and test the C-IV System) to ensure supportability, maintainability, and DED adherence. GovConnect will review and recommend changes to the design of testing and model office environments to ensure that they parallel the Execution Architecture.

• **Execution Architecture Design.** GovConnect will review and recommend changes to the Execution Architecture Design, which comprises the technical environment in which the C-IV System will run in the local offices and in the central data center. The review will include evaluation of C-IV's particular combination of tools and products and the ability of this combination to meet the requirements of the Execution Architecture.

• **Operations Architecture Design.** GovConnect will review and recommend changes to the Operations Architecture Design, which is the technical environment (a.k.a., central production data center) that will be used to support the C-IV System. GovConnect will review and recommend changes to the specific hardware and software aspects of the Operations Architecture.

• **Operations Architecture Build and Test.** GovConnect will review and recommend changes to the Operations Architecture for compliance with C-IV requirements and efficacy. The Data Center Operations Architecture review will include performance, security and backup, and recovery considerations.

• **Execution Architecture Build and Test.** GovConnect will review and recommend changes to the Execution Architecture that comprises the technical

environment in which the C-IV System will run. This review will address the configuration and process flow for both online and batch programs, ad hoc reporting, and central printing. The Execution Architecture will be evaluated for its ability to support the requirements of the overall system.

- **Technical Infrastructure Product Test.** GovConnect will complete an evaluation of and recommend changes to the Technical Infrastructure Product Test, including the evaluation of the interoperability and compatibility of all of the components in the architecture.

- **General Design for Releases 1, 2, and 3 (Requirements Traceability Matrix).** GovConnect will conduct a review of and recommend changes to the General Design for each release, which includes comparison against the revised Requirements Traceability Matrix. The matrix that should include all requirements through the General Design. The General Design will be evaluated for internal consistency and DED adherence, as well as consistency with other deliverable documents like the User Interface Standards and Guidelines.

- **Detailed Design for Releases 1, 2, and 3 (Requirements Traceability Matrix).** GovConnect will review and recommend changes to the Detailed Design for each release, with comparison against the Requirements Traceability Matrix that will be further updated to include all requirements through the Detailed Design. The Detailed Design will be evaluated for adherence to the DED and internal and external consistency with other deliverables.

2. **Testing Deliverables.** GovConnect will review and recommend changes to the System Test plans produced by the Andersen Team for Releases 1, 2, and 3. This review will include an evaluation of the system test methodology prepared by Andersen for thoroughness, completeness, and validity as well as adherence to the DED. The review and recommendations will specifically ensure the planned test conditions, cycles, and scenarios have expected outcomes that are traceable to requirements and provide for independent post-execution validation.

3.1.4.2. Independent Testing

GovConnect will independently execute focused tests during System Test and UAT on error prone, functionally complex, and mission critical portions of the C-IV system. The execution of independent tests will include test witnessing/monitoring of Andersen's System Test effort and monitoring and tracking of the Consortium's UAT effort. GovConnect will independently execute the tests, record and document the findings, and make the findings available to the Consortium and Andersen Team. The following subtasks will be completed as part of GovConnect's independent testing effort:

- **V&V Test Planning.** Prior to beginning independent testing activities, GovConnect will develop a V&V Test Plan that will be the framework for its test planning, test execution, and recommendations development activities. The V&V Test Plan will be maintained throughout the testing effort and further developed and refined as each

release is planned and executed.   As detailed in Section 2.3, Independent Testing Approach, the GovConnect Test Plan will:

- Describe the overall test approach that GovConnect will employ during the System and User Acceptance testing phases;

- Document the GovConnect System and User Acceptance Test schedules;

- Describe the GovConnect System and User Acceptance testing activities for each of the three releases;

- Describe the roles and responsibilities of the GovConnect test team members;

- Document the tools to be used in both application and performance testing;

- Document testing requirements, including features to be tested;

- Include scenarios and procedures for all of the focused tests to be performed by GovConnect; and

- Describe initial GovConnect recommendations for the management and execution of the Consortium's User Acceptance testing.

- **System Test Planning and Monitoring for Releases 1, 2, and 3.** GovConnect will update and expand the V&V Test Plan for the GovConnect System Testing effort. This effort will include an evaluation of the system test methodology prepared by Andersen for the System Test phases for each Release for thoroughness, completeness and validity as well as adherence to the DED.   The review will specifically ensure that the planned test conditions, cycles, and scenarios have expected outcomes that are traceable to requirements and provide for independent post-execution validation.   (Please note that this is a review of an Andersen deliverable. Inclusion of this task here allows for clear tracking of the overall testing effort.) The System Test portion of the GovConnect V&V Test Plan will ensure the System Test will include methods for determining that:

- Adequate and reliable processes for the testing environment exist and are parallel to the production environment;

- Version control methods are established and utilized; and

- Procedures for its test data creation, maintenance, and utilization are consistent and reliable.

GovConnect will follow the specific process outlined in Section 2.3 for conducting its independent system test activities. These activities include: conducting a traceability analysis, validating test data, assessing testing tools used by the Andersen team; obtaining software to be tested; test witnessing; and documenting results and anomalies. The results of system test planning and witnessing will be documented in the monthly testing status reports and the V&V Final Test Report. GovConnect will develop System Test Scenarios that will be independently executed and document procedures for witnessing key components of the Andersen System Test effort. The complementary effect of independently executing selected tests combined with the

independent observation and evaluation of test executed by Andersen will provide the greatest value to the Consortium in preparing for UAT.

▪ **UAT Planning and Execution.** GovConnect will update the V&V Test Plan for the UAT effort. In a manner similar to the System Test Planning activity, GovConnect will ensure that the environment, processes, and procedures are reliable and consistent. GovConnect will develop test conditions and scenarios to test the performance of the application and technical environment. The test conditions and scenarios will be written to provide for clear and concise traceability to the C-IV system requirements.

In accordance with Section 2.3, GovConnect will execute the pre-defined acceptance test procedures and metrics, log execution activities, and record all incidents, results, and issues. GovConnect will continue testing through completion, even if a defect is found (unless the defect prohibits the test from proceeding or it is deemed a critical problem). GovConnect will assess the results of the test with a visual inspection of a screen, report, or data structure and check an automated comparison of the results against previous recorded results. The results of user acceptance test planning and execution will be documented in the monthly testing status reports and the V&V Final Test Report

3.1.4.3.   Consortium UAT Support

GovConnect will support the Consortium in the development of its UAT plan. GovConnect support will include providing training and assistance to the Consortium UAT Manager on standard testing procedures and specific aspects of the C-IV testing environment. GovConnect will work with the Consortium to develop a comprehensive set of test conditions and scenarios for execution. GovConnect will also assist in training of Consortium testing staff on procedures for execution and tracking of test conditions and scenarios. GovConnect's assistance to the Consortium's UAT effort will include:

▪ The preparation, documentation, and prioritization of system investigation requests to document errors, problems, or unexpected results.

▪ Tracking and monitoring of outstanding system investigation requests. System investigation requests will be tracked until the appropriate corrections have been made and a satisfactory retest result has been achieved.

▪ The overall monitoring of User Acceptance Test progress including the actual percent of scenarios complete versus the planned percentages, retest rates, and estimated UAT completion dates.

3.1.4.4.   Monthly Test Status Reports

GovConnect will produce a monthly status report during the testing period that highlights tasks completed, tasks planned, testing status, issues, risks, initial findings, and recommendations. The status reports will be provided to the Consortium and the

Andersen Team to facilitate the quality assurance process and document critical test issues that must be resolved quickly.

3.1.4.5.   *Final Test Report*

GovConnect will prepare a comprehensive Final Test Report in accordance with the methodology outlined in Section 2.3, Independent Testing Approach. The focus of the report is to ensure clear communication with key stakeholders; both within and external to the project. The report will be used by the Consortium's final sign-off and acceptance of the results.

Major Deliverables: Requirements Traceability Matrix #1
Requirements Traceability Matrix #2
Review High Level Data Model
Review Application Requirements Analysis
Review Development Architecture Design
Review Execution Architecture Design
Review Operations Architecture Design
Review Operations Architecture Build & Test
Review Execution Architecture Build & Test
Review Technical Infrastructure Product Test
Review Release 1 General Design
Review Release 1 Detailed Design
Review Release 2 General Design
Review Release 2 Detailed System Design
Review Release 3 General Design
Review Release 3 Detailed System Design
Review Release 1 System Test Plan
Review Release 2 System Test Plan
Review Release 3 System Test Plan
GovConnect V&V Test Plan
Monthly Testing Status Report (1-18)
- Monthly Testing Status Report 10 – Release 2 UAT Readiness Assessment
- Monthly Testing Status Report 13 – Release 2 Pilot Readiness Assessment
Final IV&V Test Report

3.1.5.   Task 5 – Training Design and Development

The C-IV training activities include the identification of the training and performance support needs of the County personnel, and the effective design, development, and delivery of the training program and supporting materials. The desired outcome of the training activities is a training program that enables workers to meet new human performance objectives, rather than simply attaining short-term learning objectives.

GovConnect has been involved with many aspects of quality training through previous project experiences. Not only has GovConnect been responsible for the quality assurance of comprehensive training development and delivery for large systems, but it has also been directly involved with the preparation of both manual and automated training materials and their use.

During the C-IV Project, GovConnect's approach to quality assurance of the training-related activities will focus on two general areas: 1) design of the "master" training plan and 2) design of the release-specific training programs. As with the larger-scale system design effort, GovConnect will provide input to the appropriate Consortium and Andersen teams and work to ensure that the training approach meets the needs of the eventual user base. Once the master training program design is firmly established, GovConnect will shift its attention to assessing the capability of the release-specific training program (and supporting tools) to support the overall approach, and the original intent of training. More specifically, GovConnect will:

- **Review the C-IV Training Plan.** GovConnect will determine if the overall framework for training is prudent, given the specific development approach for this project and needs of the user population. GovConnect will provide input during development of the master training plan; and once developed, will review it to ascertain the likely effectiveness of the plan's important components. GovConnect will assess the curricula at a high level (since detail will be developed in subsequent plans); the use of classroom, hands-on, and automated training modes; reasonable trainer-trainee ratios, facilities plans, the master training schedule, and the ability to measure the results of training. In addition to focusing on Andersen's role in the overall training program, GovConnect will also examine the C-IV Project Team's and Counties' readiness for training activities.

- **Review the Training Design.** During design of the four training programs (infrastructure, Release 1, Release 2, Release 3), GovConnect will consider a range of factors that are vital to the success of the training effort. The factors include the functionality being rolled out, the need to minimize the disruption to employees, the level of change supported by the training, and the degree of support the county personnel will require in migrating to the new system. GovConnect will assess design of each training program to determine its ability to support the goals associated with each release as follows:

  - **Infrastructure.** GovConnect will determine if the program:
    - ♦ Explains the change, its implementation and implications, and the C-IV processes and environment.
    - ♦ Enables the County personnel to effectively use the deployed C-IV desktop with minimal disruption to the business while enhancing the perception of positive change.

  - **Release 1.** GovConnect will determine if the program:
    - ♦ Provides County personnel the capability to use the Collaborator Inquiry; and

♦ Prepares the personnel to maintain provider information on the Collaborator Resource Database.

- **Release 2.** GovConnect will determine if the program:
  ♦ Enables the County personnel to effectively use the C-IV System with minimal disruption to the business;
  ♦ Provides multi-faceted support to address all needs; and
  ♦ Promotes self-sufficiency in effectively using the C-IV System to support business outcomes.

- **Release 3.** GovConnect will determine if the program:
  ♦ Teaches employees the value of outcome measures; and
  ♦ Gives management the ability to transform C-IV "data" into "information" and identify best practices, forecast trends, and motivate employees to continually improve operations.

Major Deliverables: Review of the Training Plan
Review of Infrastructure Training Design
Review of Release 1 Training Design
Review of Release 2 Training Design
Review of Release 3 Training Design

3.1.6. Task 6 – Conversion

Data conversion is a critical success factor for the C-IV project because it provides data continuity from legacy systems to the new C-IV System. The four County Consortium presents unique challenges given that the conversion strategy must: 1) allow for County-specific flexibility for data mapping, extraction, and overall approach; and 2) standardize data editing/verification and load routines across all Counties.

GovConnect understands the importance of a successfully planned and executed data conversion effort. Even with the best-designed system, project implementation will suffer greatly if the data is not converted in a properly and timely manner. When case conversion is not well planned and automated to the maximum degree possible, the onus to correct erroneously converted data will fall on the local offices and the users. Such a scenario is doubly burdensome since County offices must continue day-to-day work while data is being corrected.

GovConnect will guard against such a possibility by supporting the Counties in the review of the Andersen Team's analyses, evaluations, plans, developments, tests, preparations, and actual conversion efforts. GovConnect will complete the following deliverable reviews with emphasis on the traceability, correctness, consistency, completeness, accuracy, readability and testability of the deliverables:

▪ **Review the Conversion Master Plan and Plans for Releases 1, 2, and 3**. GovConnect will assess the adequacy of the Conversion Master Plan and the Plans for each release. As part of this effort, GovConnect will determine the impact of conversion on the local offices and review conversion reporting procedures that will

communicate reconciliation issues, conversion status, data rejection, and missing data status. GovConnect will also evaluate the plans for completeness based on its own experience in other conversion situations and to ensure that lessons learned during the Pilot Office Test are incorporated. GovConnect will not only consider the Andersen Team's approaches and procedures for ensuring that data from all available sources is identified and available, but will also look at such things as definitions of roles and responsibilities for the Consortium staff. The Plans will be reviewed with particular attention paid to key issues such as:

- Coordinated, unduplicated management of cases between existing systems and C-IV;

- Consolidation of client records from multiple systems;

- Cross-referencing between existing systems and C-IV;

- Routines to ensure system compatibility during the conversion effort; and

- Ensuring data purification is accomplished well in advance of planned conversions.

As part of the Conversion Plan review, GovConnect will evaluate the Andersen Team's Conversion Specifications Document to determine that it identifies all systems to be converted and defines all data file formats in accordance with contract requirements.

- **Review the Completed Conversion Tasks.** As part of the final conversion tasks, GovConnect will review the data conversion reports as conversion for each County is completed. The reports will be reviewed to determine that data has been satisfactorily converted in accordance with contract requirements and that any outstanding problems have been resolved or pose no impediment prior to any systems cutovers.

GovConnect will provide continual feedback through daily communications and status updates regarding conversion risks, issues, and problems. GovConnect will likewise provide recommendations and suggested resolutions to the Consortium Project Team.

Major Deliverables: Review Conversion Master Plan
Review Release 1 Conversion Plan – Merced
Review Release 1 Conversion Plan – Riverside
Review Release 1 Conversion Plan – Stanislaus
Review Release 1 Conversion Plan – San Bernardino
Review Release 2 Conversion Plan – Merced
Review Release 2 Conversion Plan – Riverside
Review Release 2 Conversion Plan– Stanislaus
Review Release 2 Conversion Plan– San Bernardino
Review Release 2 Conversion Plan Tasks Completed – Merced
Review Release 2 Conversion Plan Tasks Completed – Riverside
Review Release 2 Conversion Plan Tasks Completed – Stanislaus
Review Release 2 Conversion Plan Tasks Completed – San
Bernardino

3.1.7. Task 7 - Consortium-wide Implementation

The Andersen Team will develop a plan for Consortium-wide implementation based on the release schedule. The plan will document the methodology for completing tasks and will clarify roles and responsibilities for the Andersen Team and Consortium team members. Major implementation tasks will include:

▪ **Infrastructure Release.** During Infrastructure implementation, County workers will receive the hardware required to access and use the C-IV System. Though they will not actually begin to access and apply C-IV functionality during infrastructure implementation, they will begin to perform e-mail, task management and calendaring functions using their new workstation and a desktop application called Domino. As their desktop hardware is replaced, County staff will begin accessing their legacy systems through the new interface. To prepare the Counties for the technology implementation, a variety of activities will occur including:

- Readiness Assessment

- Training and Support

- Evaluation

▪ **Pilot Activities.** Pilot activities will be completed for each planned release, with the exception of the Release 3. Pilot activities include establishing pilot environments, conducting the pilot tests, documenting pilot results, and using this information to support the full Consortium implementation.

▪ **Releases 1, 2, and 3.** During each of these releases, the Andersen Team will provide the technology, application, and policy support users need to effectively apply their new capabilities. The Counties will be prepared for each release implementation through the following activities:

- Readiness Assessment

- Training and Support

- Conversion

- Evaluation

During implementation, GovConnect's roll will be to work collaboratively with the Consortium Project Team to review the Implementation Plans and the Pilot Test effort for Release 2. Listed below are specific tasks that GovConnect will support through review and evaluation as the implementation of each release occurs. GovConnect will provide status as needed to communicate findings relative to schedule, staffing, risks, and problems and provide possible solutions to identified issues.

▪ **Review Overall Implementation Plan and Implementation Plans for Releases 1, 2, and 3.** Prior to the start of Consortium-wide Implementation, GovConnect will review and evaluate the Andersen Team's overall Implementation Plan. Prior to each release, GovConnect will review and evaluate the Implementation Plan for each release. During Consortium-wide Implementation of each release, GovConnect will

review and evaluate progress in executing the approved Consortium-wide Implementation Plans. GovConnect will advise the Consortium Project Management Team of any identified issues or risks that could adversely impact the schedule.

As part of the assessment of implementation plans, GovConnect will:

- Review the Implementation Plans for comprehensiveness and assess them for the probability of achieving key dates in the implementation schedule.

- Review the resource requirements of both the Andersen Team and the Consortium to assess their adequacy in meeting the plan. Roles of the Andersen Team, Consortium Project Team, and County local offices will be evaluated to ensure they are properly integrated to support implementation.

- Review the plans to integrate the conversion effort with implementation, including site readiness and conversion reports and system response times, to ensure acceptable levels of accuracy and performance will be available during and after implementation.

- Verify (having obtained satisfaction and assurance that the proper hardware and local network installations have occurred) that the correct version of the C-IV application is available and functioning properly. This will be done by reviewing the results of the tests performed by the Andersen Team and through the performance of independent testing.

▪ **Review Release 2 Pilot Completion.** GovConnect's review of Pilot Completion for Release 2 will consist of on-site verifications of Pilot activities and timely reviews of the Pilot results. GovConnect will review the sufficiency of the test to determine if it continues or is repeated until performance is satisfactory. Problems or errors that require software modifications will be tracked and solutions will be documented. GovConnect will provide its evaluation through regular status reports. Based on the success factors experienced during the Pilot Test phase, GovConnect will provide input to the Consortium Project Management Team regarding the decision to implement Release 2 Consortium-wide.

Major Deliverables: Review of the Overall Implementation Plan
Review of Release 1 Implementation Plan
Review of Release 2 Implementation Plan
Review of Release 2 Pilot Completed - Stanislaus
Review of Release 3 Implementation Plan

3.1.8. Task 8 – Initial Maintenance and Operations

From the first month of the project through month 18, the Maintenance and Operation (M&O) management team will prepare for Release 1. It is very important that the M&O team take an active role in the design and development activities and in establishing production related procedures for the support of the infrastructure. This will provide the M&O managers with an in-depth understanding of the application and the technical

architecture that they will support. Beginning in Month 18, and continuing through Month 42 of the project plan, the Andersen Team will establish the Maintenance and Operations and the Application Software Maintenance Teams; as well as, the support processes, tools, and procedures required to maintain and operate the C-IV system.

In support of initial M&O, GovConnect will review the Andersen Team's initial System Operations and Support Plan to determine that:

▪ All Service Level Agreements (SLAs) and Operational Level Agreements (OLAs) have been clearly defined.

▪ The roles and responsibilities of the M&O team have been clearly defined and that organizational procedures have been developed to facilitate delivery of quality service.

▪ An appropriate level of resources has been allocated to support each release and that the addition of resources coincides with the implementation of each release and the scheduled increases in required M&O support.

▪ The schedule for the establishment and build-up of the M&O organization and environment coincides with the implementation for each release.

▪ Customer communication procedures that promote open and continual communication between the Contractors, Counties, Consortium, and State agencies have been developed.

▪ Help desk management approach is clearly defined and addresses:

  • Staffing levels;

  • Help desk procedures;

  • Process for prioritizing, managing and controlling help desk requests;

  • Monitoring and reporting on overall help desk response times and results;

  • Methods for trend analysis to identify and resolve common problems; and

  • Hours of operation, accessibility by the users, and methods for communication to and from the user community.

▪ The System Operations and Support Plan for C-IV conforms to the Consortium's requirements, specifically for conducting and supporting central data center operations, systems administration, and hardware maintenance. GovConnect will review the procedures for updates and corrective actions relative to functional, operational, and performance deficiencies, and the incorporation of requested changes.

▪ Security procedures allow authorized users access to system resources and data while preventing unauthorized access, modification, or destruction of system resources or data.

▪ Detailed procedures have been established for overall application maintenance including:

- Planning and coordinating application fixes and enhancements;

- Implementing application changes;

- Maintaining system data and data structures;

- Maintaining and supporting ongoing system and performance testing;

- Implementing emergency or interim application changes;

- Ongoing system training;

- Monitoring and managing application effectiveness; and

- Maintaining communication lines with users.

- Release management procedures are well-defined and communicated during each release so that environment configurations and process/scheduling migrations are well managed.

- Management of hardware and software assets is well defined and includes asset registration and tracking, procurement, maintenance and license management.

- Remote maintenance, turnover, and operational procedures meet the stated requirements and can support initial and long-term maintenance and operations.

- Back-up and recovery procedures provide an approach that will result in no losses in a case of system interruption and a secure and timely approach to resuming system activities. Specifically, GovConnect's review and evaluation will address the following:

  - Resource requirements and roles of Andersen Team and Consortium,

  - Backup Direct Access Storage scheduling and procedures,

  - Plans for offsite storage,

  - Disaster recovery site operations procedures,

  - Emergency responsiveness,

  - Failure assessment,

  - Disaster Recovery,

  - Recovery site operations, responsibilities, and procedures,

  - Restoration plans and procedures,

  - Backup and recovery reporting.

- Appropriate software tools will be used to support the application and the environment.

- Operational reports will be produced on an ongoing basis to alert key stakeholders of operational service levels, application processing status, and cost of services.

Prior to the implementation of Release 1, Andersen will update the System Operations and Support Plan. GovConnect will review the updated plan to verify that the additions and refinements are specific and valid for the implementation of Release 1. Again, as part of the review of the Release 2 Pilot deliverable, GovConnect will review this the updated plan to validate that additions and modifications are appropriate to the implementation of Release 2.

Major Deliverables: Review of the initial System Operations and Support Plan
Review Updated System Operations and Support Plan

3.2. WORK PLAN

GovConnect will provide Quality Assurance Services for the Development/Implementation Project for the C-IV Consortium beginning in Month 1 and continuing through the end of implementation (Month 42). Attachment A contains the detailed Work Plan for GovConnect's involvement and highlights specific dates for GovConnect deliverables and services.
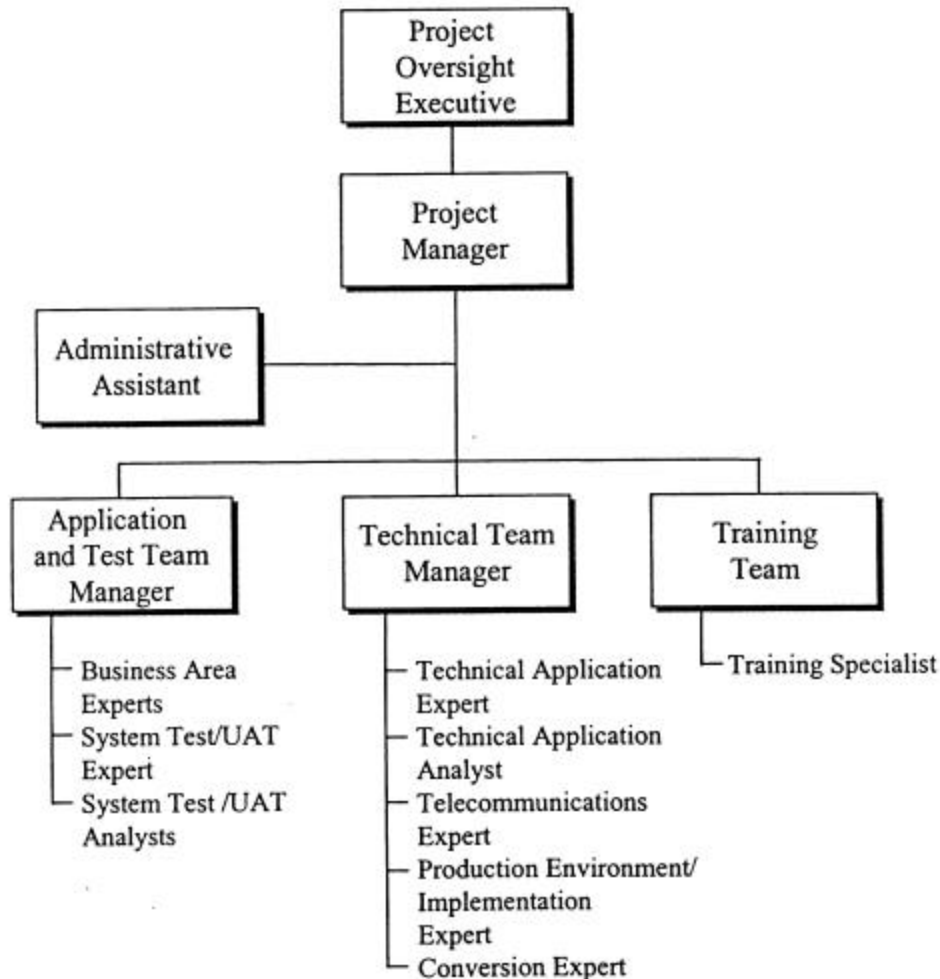
4. GOVCONNECT TEAM

The GovConnect Quality Assurance (QA) Project Team will act on behalf of the Consortium to assure adherence by the Andersen Team to all of C-IV's functional, technical, and contractual requirements. The GovConnect Team will actively monitor requirements specified in the SOP, the Andersen Team's response to the SOP, contractual agreements, and the approved work plan to be finalized during project initiation. In the event requirements are not being fully met, the GovConnect Team will work with the Consortium to develop plans and timelines for meeting requirements without sacrificing quality of deliverables. GovConnect will expand its current C-IV Planning team to meet the evolving needs of the design, development, and implementation phases of the Project. GovConnect staff will be full-time (during the span of their specific assignment as outlined in Attachment D) and perform C-IV related activities on-site, unless otherwise approved by the C-IV Project Director. The GovConnect organization proposed for the C-IV Project is illustrated below.

GovConnect Quality Assurance Team
Project Organization

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                        ┌──────────────┐
                        │   Project    │
                        │  Oversight   │
                        │  Executive   │
                        └──────┬───────┘
                        ┌──────┴───────┐
                        │   Project    │
                        │   Manager    │
                        └──────┬───────┘
        ┌────────────────┐     │
        │ Administrative │─────┤
        │   Assistant    │     │
        └────────────────┘     │
        ┌──────────┬───────────┴───────────┬──────────┐
```

Application and Test Team Manager	Technical Team Manager	Training Team

Application and Test Team Manager
- Business Area Experts
- System Test/UAT Expert
- System Test /UAT Analysts

Technical Team Manager
- Technical Application Expert
- Technical Application Analyst
- Telecommunications Expert
- Production Environment/ Implementation Expert
- Conversion Expert

Training Team
- Training Specialist

The GovConnect Team is comprised of experienced, qualified professionals with diversified backgrounds and skills in the appropriate management, programmatic, operational, and information technology disciplines. GovConnect, in conjunction with the C-IV Project Director, has identified three key staff positions as follows:

- Project Manager – Ms. Betty Lundy
- Technical Team Manager – Mr. Dave Murphy

▪ Application Development and Test Manager – To be determined.

GovConnect commits to deliver specific personnel, as approved by the Consortium, for these key positions. GovConnect plans to assign Mr. Don Cartwright as the Application Development and Test Manager. Once the start date of the C-IV Development Project is confirmed, GovConnect will work to designate this key resource.

Representative resumes for the remaining QA Team members are included in Attachment B. While specific staff have not yet been assigned to some positions, as soon as the start date of the project is confirmed, GovConnect will assign and commit all remaining staff.

As is the case today, the Consortium will retain the right to approve, reject, or remove GovConnect staff beginning with initial acceptance and continuing on throughout the 42-month project. The following subsections provide a summary of the QA Team member roles and their responsibilities.

4.1. QA MANAGEMENT TEAM

The QA Management Team is comprised of three team members:

▪ **Project Oversight Executive.** An GovConnect Senior Vice-President will provide executive oversight to the Quality Assurance team. He/she will regularly discuss progress and strategies with the GovConnect Project Manager, Mrs. Betty Lundy. On-site participation will be limited to regularly scheduled GovConnect management reviews. Additionally, executive oversight will be made available to offer consultative or technical advice as requested by the Consortium Project Director.

▪ **Project Manager.** Mrs. Betty Lundy will continue her role as Project Manager for GovConnect during the development and implementation phases of the C-IV Project. As the leader of the C-IV Management Team, Mrs. Lundy will continue to work closely on a daily basis with the Consortium Project Director to assist in ongoing project management related tasks such as work plan and budget monitoring and assessment, issue and risk management, and status reporting. Mrs. Lundy will assume overall management responsibility for the GovConnect staff and for quality and content of all reports produced by the GovConnect Team, but will leave day-to-day operations, application, business and technical support to the GovConnect staff with the appropriate areas of expertise.

▪ **Administrative Support.** Mrs. Lori Wilkinson will continue her Administrative Support role for GovConnect during the development and implementation phases of the C-IV Project and provide direct project support to the GovConnect Project Manager and staff. Mrs. Wilkinson will be responsible for the logging and tracking of all deliverables reviewed and produced by the GovConnect QA Team, as well as providing ongoing project deliverable and task support.

4.2. QA APPLICATION DEVELOPMENT AND TESTING TEAM

The QA Application Development and Testing Team is comprised of nine team members filling four roles:

- **Application Development and Test Manager.** The application development and test manager will lead the GovConnect QA Team's reviews of application deliverables (as described in Section 3.1.4 and as outlined in the GovConnect Work Plan). The application development and test manager will work closely with the QA Technical Team and the Consortium's technology staff to coordinate and support reviews of the C-IV application structure, design, development and test DEDs and deliverables. This position will also be responsible for identifying, documenting and assessing application development related issues as well as supporting risk identification and mitigation in the application development and test areas. The application development and test manager will lead the analysis of the impact of proposed program and policy changes throughout the project. This position will function as a deputy project manager and report to the GovConnect QA Project Manager.

- **Business Area Experts.** GovConnect's three business area experts will be responsible for the quality reviews of application deliverables (as outlined in the GovConnect work plan) associated with the five C-IV business areas, as well as interfaces and utilities. Their primary focus will be to verify that the application functionality, interfaces, and utilities are designed and developed to meet the requirements as specified in the C-IV business model. These staff will also assist in the analysis of the impact of proposed program and policy changes throughout the project.

- **System Test/UAT Expert.** GovConnect's system test/user acceptance test expert will lead the GovConnect Test Team's review of testing-related deliverables (as outlined in the GovConnect work plan) and ensure the testing approaches, processes and inputs/outputs meet the established C-IV requirements, are accurate and relevant, and demonstrate the ability of the system to meet functional and technical requirements. The system test/user acceptance test expert will also oversee GovConnect's independent test efforts in coordination with the GovConnect Technical Team, including planning and execution aspects. The test expert will also provide support to the Consortium User Acceptance Test Team in both test planning and execution activities. This position will prepare the monthly Test Status Report and will ensure that all test related issues and errors are documented appropriately. The test expert will also track all outstanding test defects through the fix and retest processes.

- **System Test/UAT Analysts.** The five GovConnect test analysts will provide support in both system and user acceptance testing. The test analysts will support the development of the QA test methodology and plan, test conditions and scenarios, test schedules, batch schedules, and expected results. In addition, working at the direction of the system test/user acceptance test expert, the test analysts will conduct an independent test for each release as a means of providing validation of system

functionality and capability. These test analysts will also provide support to the Consortium User Acceptance Test Team in both test planning and execution activities.

4.3. QA TECHNICAL TEAM

The QA Technical Team will provide support for all technically related deliverable reviews and is comprised of six team members:

▪ **Technical Team Manager.** Mr. Dave Murphy will serve as GovConnect's technical team manager. As the technical team manager, he will lead the QA technical team and provide quality assurance reviews and input specific to multiple areas of technical design and development. Mr. Murphy will focus on assessing the adequacy of the operational and execution architecture design and "builds" and assisting in related reviews of the database and interface designs as well as conversion. Mr. Murphy will lead all performance related tests and will work with the GovConnect application development and test manager and test expert to oversee the technical aspects of system test and UAT. The technical team manager will provide guidance and overall direction in support of the assessment of network design, site preparation, installation and implementation and initial M&O activities. This position will also be responsible for identifying, documenting and assessing technical issues as well as supporting risk identification and mitigation. The technical manager will lead the analysis of the impact of proposed configuration modifications to the design of the execution and operations architecture throughout the project. This position will function as a deputy project manager and report to the GovConnect QA Project Manager.

▪ **Technical Application Expert.** The technical application expert will have significant full life cycle development experience with multiple tools and languages as well as relational database experience. This position will be responsible for providing quality assurance and technical support relative to the design, development, test, and implementation of the application. The technical application expert will evaluate each application development process and methodology for long-term efficiency and maintainability. This includes reviews of the configuration management for the C-IV application, application requirements analysis, high-level data model, architecture design, technical infrastructure, general and detailed system designs for each release, and system performance and capacity planning methodologies along with ongoing performance and capacity reporting. In addition, the technical application expert will lead the technical aspects of system testing, review the conversion and implementation deliverables and the initial M&O Plan.

▪ **Technical Application Analyst.** The technical application analyst will have development experience at the programmer/analyst level in multiple software development tools/languages and will work closely with the technical application expert to provide quality assurance and technical support relative to the design, development, test, and implementation of the application. This includes reviews of the application requirements analysis, high-level data model, architecture design, technical infrastructure, general and detailed system designs for each release, and

system performance and capacity planning methodologies along with ongoing performance and capacity reporting. The technical application analyst will also assist in the technical aspects of system testing, and in the review of the conversion and implementation deliverables and the initial M&O Plan.

▪ **Telecommunications Expert.** The telecommunications expert will be responsible for the review and assessment of the network related deliverables. The focus of the analysis will be on the telecommunications design proposed by the Andersen Team to ensure the plans, design, installation, and maintenance provide the necessary level of service and performance required by the Consortium for the C-IV system. Specifically, the telecommunications expert's role will be to support the analysis and review of:

- Consortium WAN and LAN designs,

- Network sizing, performance and throughput,

- Network security,

- Interface packets and protocols, and

- Network management processes and procedures.

The telecommunications expert will support the Consortium in the acceptance related reviews of the installed network in the four C-IV counties. The telecommunications expert will be responsible for documenting, assessing and proposing solutions for all network related issues.

▪ **Production Environment/Implementation Expert.** The GovConnect production environment/implementation expert will be responsible for reviewing the Andersen Team's Site Preparation and Installation Plans and the Implementation Plans (including Pilot Plans) for comprehensiveness and assess these deliverables for probability of achieving key dates in the site preparation, installation and implementation schedules. Specific roles and responsibilities of the Andersen Team, Consortium Project Team, and County local offices will be evaluated to ensure that they are properly defined, integrated and documented to effectively support site preparation, installation and implementation activities. This position will observe and monitor actual Pilot and implementation activities in selected key locations. The production environment/implementation expert will be responsible for identifying, documenting, assessing and proposing solutions for all site preparation, installation, Pilot and implementation related issues.

▪ **Conversion Expert.** GovConnect's conversion expert will be responsible for assessing the adequacy of the Andersen Team's Conversion Plan and detailing the impact of its execution on the local offices. The conversion expert will also ensure that all available systems and their data have been considered, that data from these sources has been properly defined for conversion to the new system, and that accuracy of the data has been properly assessed. The conversion expert will lead the conversion related system and acceptance test efforts, and document all corresponding conversion related errors. The conversion expert will also ensure that

all manual conversion processes and procedures have been adequately addressed and documented. The conversion expert will review data conversion reports and provide feedback to the Consortium regarding any outstanding issues or deficiencies that much be addressed to proceed. The conversion expert will commence this review beginning with pilot and continuing throughout Consortium-wide implementation for each release.

4.4. QA TRAINING TEAM

The GovConnect training specialist will review the training program at multiple levels. The training specialist will review the design of the master training plan (which will guide the overall training effort) to determine the adequacy of the approach to training, specific training methodologies and tools, resources and corresponding roles, and the master training schedule. After approval of the master training plan, the training specialist will focus on reviewing the design of the training programs for each release. The training specialist's primary focus in this more detailed review will be to determine the ability of the training programs to enable users to utilize the functionality in each respective release to achieve outcomes envisioned in the C-IV business model. Once the training programs and all supporting materials (such as automated Computer Based Training, on-line training guides and on-line help) are developed, the training specialist will review and test the actual materials for comprehensiveness and ease of use. The training specialist will also conduct interviews with Consortium staff immediately after the completion of training, and again near the end of Release 1 and Release 2 Pilots to evaluate the effectiveness of training from the worker's perspective after staff have used the application in a live production setting. This position will work with the QA Application Development and Test Manager to ensure that any changes to the application are also reflected in updated training and training materials as appropriate. The training specialist will be responsible for documenting, assessing and recommending solutions for all training related issues.

4.5. STAFF RESUMES

Key staff and representative resumes for proposed staff are presented in Attachment C. The resumes highlight each individual's experience and skills related to the respective positions. Additional resumes are provided to indicate the types of skill sets that GovConnect can provide to the Consortium, as specialized project needs are determined.

5. COST PROPOSAL

This section includes all costs associated with QA related project management support and deliverable review services to be provided to the Consortium for the 42-month C-IV Project. These costs are based on the scope of work and schedule identified by the Consortium and as documented within this QA Statement of Work and corresponding Work Plan.

The costs for deliverables have been derived by applying the appropriate hourly rate for a position to the estimated number of hours associated with a specific deliverable. All pricing was calculated by applying the position specific hourly rates as defined in the California Department of General Services Master Service Agreement (MSA) dated September 25, 1997. The costs reflect the allowable 5% hourly rate increase every two years, beginning September 2001, and again in September 2003.

These costs are documented and presented in two different views.

▪ **Attachment D, GovConnect QA Staffing/Cost Projection.** This chart depicts the GovConnect QA Staffing Plan and Costs by month for the duration of the C-IV Project. This chart is based on the C-IV IAPDU dated March 3, 2000. The staffing plan and corresponding costs reflect the requested scope of work.

▪ **Attachment E, GovConnect QA Deliverable Payment Schedule**. This chart contains all deliverables to be produced by the QA Team that require an associated payment. All submittal dates are included. The total deliverable costs are also displayed as well as a summary of total deliverable costs by major task.

The majority of deliverables identified in this Statement of Work and Work Plan require a corresponding payment; however, there is a primary exception – the monthly PCD/Work Plan Updates are included in the cost of the Monthly Status Report. For this reason, the PCD Updates reflected in Attachment B, GovConnect C-IV QA Deliverables, are not shown in Attachment E.

GovConnect will not proceed with any as-needed or additional support services unless specifically authorized in writing by the C-IV Project Director.